

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

APPROVED

by Rector of the Educational
Institution «Belarusian State
Medical University»

S.P.Rubnikovich

24.06.2023

Reg. # UD- *07-19/2324*/edu.

**Контрольный
экземпляр**

NON-REMOVABLE PROSTHETICS

**Curriculum of the educational institution
in the academic discipline for the specialty**

1-79 01 07 «Dentistry»

Curriculum is based on the educational standard of higher education in the specialty 1-79 01 07 «Dentistry», approved 26.01.2022, registration # 14; on the educational plan in the specialty 1-79 01 07 «Dentistry», approved 27.06.2023, registration # L 07-19/2324/уч.

COMPILERS:

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RECOMMENDED FOR APPROVAL:

by the Department of Prosthetic Dentistry of the educational institution «Belarus State Medical University» (protocol # 20 of 13.06.2023);

by the Scientific and Methodological Council of the educational institution «Belarus State Medical University» (protocol # 6 of 27.06.2023)

EXPLANATORY NOTE

«Non-removable Prosthetics» is an academic discipline of the module «Prosthetic Dentistry», containing systematized scientific knowledge about the etiology, pathogenesis, diagnosis, treatment and prevention of anomalies in the development of acquired defects in the crowns of teeth and dentition.

The aim of the discipline «Non-removable Prosthetics» is the formation of specialized competencies for solving problems of interpersonal and professional interaction; building a clinical diagnosis; drawing up a treatment plan for patients; carrying out prosthetic treatment of patients with defects of crowns and dentitions with fixed prostheses.

The objectives of the discipline «Non-removable Prosthetics» are to develop student's scientific knowledge about the etiology, pathogenesis, clinical picture, diagnosis, differential diagnosis, prevention, treatment methods for patients with defects in crowns and dentitions, the skills necessary for examining patients; making a diagnosis; provision of prosthetic dental care to patients with defects in teeth and dentitions with fixed prostheses.

The knowledge, skills and abilities gained in the study of the discipline «Non-removable Prosthetics» are necessary for the successful study of the following academic disciplines «Removable Prosthetics», «Maxillofacial Orthopedics and Orthopedic Dentistry» and the modules «Therapeutic Dentistry», «Oral and Maxillofacial Surgery».

Studying the educational discipline «Non-removable Prosthetics» should ensure the formation of students' universal, basic professional and specialized competencies:

SC-4. Conduct examination, apply diagnostic methods, modern technologies of treatment and rehabilitation of patients with defects of teeth hard tissues and partial secondary adentia, patients with complete loss of teeth and the basics of temporary and permanent splinting of teeth with the use of fixed and removable orthopedic structures for periodontal tissue diseases, patients with complex maxillofacial pathology at the in-patient department.

As a result of studying the discipline «Non-removable Prosthetics», the student must

know:

etiology, pathogenesis, clinical picture, diagnosis, differential diagnosis, prevention and methods of prosthetic treatment of patients with defects in crowns and dentitions with fixed prostheses;

methods of preparing the oral cavity for prosthetic interventions, methods of anesthesia;

basic and auxiliary dental materials for the manufacture of fixed prostheses;

mechanisms of adaptation to prostheses and the impact of prosthetic interventions on the dental system and the patient's body;

organizational and economic aspects of the activities of prosthetic departments of dental clinics;

be able to:

make plan and conduct communication;

organize the workplace of a prosthodontist, taking into account ergonomics and in accordance with the requirements of asepsis, antisepsis, safety precautions;

prevent general complications in a patient at a dental appointment and, if necessary, provide emergency medical care;

conduct an examination of patients, determine indications for general health and special measures before prosthetics;

interpret the results of basic and additional research methods;

formulate a diagnosis based on the data of the study;

suggest an prosthetic treatment plan;

justify the choice of treatment method and design of fixed prostheses;

fill in medical documentation;

perform:

methods of patient examination in prosthetic dentistry;

methods of diagnostics and planning of prosthetic treatment of patients;

methods of prosthetic treatment of patients with defects of hard dental tissues;

methods of prosthetic treatment of patients with partial absence of teeth;

techniques of preparation of hard tissues of teeth for various prosthetic constructions

methods for taking impressions with various impression materials;

methods of fitting crowns and checking the designs of fixed prostheses;

methods of fixation of fixed prostheses.

Total number of hours for the study of the discipline is 312 academic hours are allotted for the study of the academic discipline. Classroom hours according to the types of studies: lectures – 28 hours, practical classes – 160 hours, student independent work (self-study) – 124 hours.

Intermediate assessment is carried out in accordance with the curriculum in the specialty in the form of a credit (5 semester) and an examination (6 semester).

The form of education is full-time.

**ALLOCATION OF ACADEMIC TIME
ACCORDING TO SEMESTERS OF STUDY**

Code, name of the specialty	semester	Number of academic hours						Form of intermediate assessment
		total	in-class	including			out-of-class self-studies	
				lectures	supervised student independent work	practical classes		
1-79 01 07 «Dentistry»	5	136	94	14	-	80	42	credit
	6	176	94	14	-	80	82	examination

THEMATIC PLAN

Section (topic) name	Number of class hours	
	lectures	practical
1. Prosthetic treatment of crown defects	14	80
1.1. Prosthetic treatment of dental crown defects with inlays and veneers	4	35
1.2. Prosthetic treatment of dental crown defects with artificial crowns	6	30
1.3. Prosthetic treatment in the complete absence of a tooth crown	4	15
2. Prosthetic treatment of dentition defects with fixed prostheses	14	80
2.1. Partial defects of the dentition. Odontoparodontogram. Methods of tooth preparation and impression taking for various fixed prosthetic constructions	5	30
2.2. Clinical and laboratory stages of manufacturing bridges from various structural materials	7	40
2.3. Dental implantation	2	10
Total hours	28	160

CONTENT OF THE EDUCATIONAL MATERIAL

1. Prosthetic treatment of crown defects

1.1. Prosthetic treatment of dental crown defects with inlays and veneers

Aim and objectives of the discipline «Fixed dentures». Principles of medical ethics and deontology. The relationship between a doctor and a patient, a doctor and a dental technician, a doctor and medical workers.

Preparation of the oral cavity for prosthetics. Therapeutic training, surgical training, orthodontic training, special training. Methods of anesthesia in the preparation of teeth.

Etiology, pathogenesis, clinics, diagnosis, differential diagnosis, prevention and methods of treatment of the main nosological forms of pathology of the dentoalveolar system: pathology of hard tissues of the teeth, partial and complete absence of teeth, periodontal diseases, anomalies and deformations of the dentoalveolar system, traumatic lesions of the jaws and face, diseases temporomandibular joint, diseases of the oral mucosa, combined forms of lesions and diseases of the dental system.

Dental photo protocol when planning prosthetic treatment of patients with defects in dental crowns.

Working, auxiliary impressions and modern materials for their taking. Steps for taking an impression. Getting a digital impression. Laboratory scanning of models.

Inlays, indications and contraindications for their use. Cavity classifications. Features of the preparing of cavities for inlays, depending on the topography of the defect. Methods for making tabs. Clinical and laboratory stages of tooth crown restoration using an inlay. Fitting and fixing inlays.

Veneers, indications and contraindications for their use. Features of the preparation of tooth crowns during prosthetic treatments with veneers, in accordance of the topography of the defect. Methods of making veneers. Modern construction materials for the manufacture and fixation of veneers. Clinical and laboratory stages of tooth crown restoration using veneers. Fitting and luting of veneers.

Examination of patients with dental diseases: complaints and anamnesis of the disease taking, diagnosing, interpreting the results of x-rays, selection of indications for the manufacture of inlays and veneers, determining the tactics of treating patients with defects in dental crowns with inlays and veneers, preparing cavities for inlays and veneers on plaster models, taking impressions with alginate and silicone materials, choosing a drug and method of anesthesia. Filling in medical documentation.

1.2. Prosthetic treatment of dental crown defects with artificial crowns

Stamped crowns, plastic crowns, cast, all-ceramic (milled, sintered and pressed), metal-acrylic and metal-ceramic crowns, indications for their use. Clinical and laboratory stages of crown manufacturing. The method of taking impressions and their evaluation.

Principles of tooth preparation for artificial crowns. Rules for the preparation of teeth and the number of hard tissues removed in the manufacture of various prosthetic structures (stamped crowns, plastic crowns, ceramic, cast and combined (metal-acrylic and metal-ceramic) crowns). Methods for assessment the quality of preparation. Security zones according to Abolmasov-Klyuev.

Method of fitting of single crowns. Rules and sequence of sitting and cementing of crowns.

Examination of patients with dental diseases: taking complaints and anamnesis of the disease, formulating a diagnosis, interpreting the results of x-ray studies, selecting indications for the manufacture of artificial crowns (stamped, acrylic, combined, cast, metal-acrylic, metal-ceramic, all-ceramic), selection of a treatment plan for patients with defects in dental crowns, taking impressions with alginate and silicone materials. Filling in medical documentation.

1.3. Prosthetic treatment in the complete absence of a tooth crown

Post constructions and their elements, indications for their use. Examination methods of patients with the complete absence of a tooth crown. Requirements for condition of the root and its surrounding tissues. Clinical-and-laboratory stages of post making: post-teeth, modern construction materials for manufacturing post-teeth.

Prosthetic treatment of patients with post constructions in case of tooth crown absence, indications for their use. Clinical-and-laboratory stages of post constructions making. Fiberglass posts and materials for their fabrication.

Examination of patients with dental diseases: taking complaints and anamnesis of the disease; diagnostics; interpretation of the results of x-ray studies; selection of indications for the manufacture of various post structures; selection of a treatment plan for patients with a complete absence of a tooth crown, according to the choice of

materials for fixing fiberglass posts; taking impressions with alginate and silicone materials. Filling in medical documentation.

2. Prosthetic treatment of dentition defects with fixed prostheses

2.1. Partial defects of the dentition. Odontoparodontogram. Methods of tooth preparation and impression taking for various fixed prosthetic constructions

Prosthetics of patients with partial teeth loss (secondary partial edentia). Examination methods of patients with partial teeth loss. Partial dentition defects. Clinics, etiology, classification of dentition defects (Kennedy, Gavrilov). Biological and clinical fundamentals of treatment with bridges. Periodontium: structure, functions, reserve strength and endurance. Odontoparodontogram.

Indications and contraindications for use of bridges. Clinical-and-laboratory sequence of making soldered, cast metal and combined (metal-acrylic and metal-ceramic) bridges. Tooth preparation in dental treatment of partial tooth loss with bridges. Quality assessment criteria of tooth preparation. Specific features of tooth preparation depending on denture types.

The methods of taking impressions for the manufacture of the pontic of the dental bridge. The choice of impression materials depending on the construction materials of prostheses.

Examination of patients with dental diseases: taking complaints and anamnesis of the disease; diagnostics; interpretation of the results of x-ray studies; selection of indications for the manufacture of various constructions of bridges; interpretation of the results of odontoparodontogram and X-ray examination data, selection of a treatment plan for patients with dentition defects, preparation of teeth for the manufacture of bridges (stamped-soldered, cast, combined) on gypsum models; taking impressions with alginate and silicone materials. Filling in medical documentation.

2.2. Clinical and laboratory stages of manufacturing bridges from various structural materials

Detection and methods of centric occlusion fixation in prosthetic treatment of partial tooth loss with bridges. Fitting of crowns in prosthetics with bridges in case of partial tooth loss, impressions taking. Check of dental bridge construction. Dental bridge fitting and sitting. Quality assessment criteria for supporting elements and the denture itself. Bridge fixation. Modern technologies in Prosthodontics. Pressed ceramic. CAD / CAM, CEREC systems (milled ceramic). The use of fiberglass posts in prosthodontics. Adhesive bridges. Characteristics and properties of modern construction materials. Techniques of modern denture making.

Errors and complications in prosthetic treatment of patients with partial defects of the dentition with bridges.

Examination of patients with dental diseases: taking complaints and anamnesis of the disease; diagnostics; interpretation of the data obtained, taking into account the classification of defects in the dentition; determination and fixation of centric occlusion in the manufacture of bridges on gypsum models, on the tactics of checking the design of bridges and the choice of material for fixation, on the choice of construction materials for the manufacture and fixation of adhesive and all-ceramic prostheses. Filling in medical documentation.

2.3. Dental implantation

Dental implantation. Types, indications and contraindications for use, characteristics of construction materials. Varieties of dental implants and abutments.

Examination of patients with dental pathology: taking complaints and anamnesis of the disease; diagnostics; determination of the plan of treating patients using dental implants, the choice of abutments for the manufacture of fixed structures. Filling in medical documentation.

ACADEMIC DISCIPLINE CURRICULAR CHART

Section, topic #	Section (topic) name	number of hours			Self-studies	Form of control
		lectures	Practical classes			
	5 semester					
1.	Prosthetic treatment of crown defects	14	80	42		
1.1	Prosthetic treatment of dental crown defects with inlays and veneers	4	35	18		
	Aims, objectives of the discipline «Non-removable prosthetics». Principles of medical ethics and deontology. The main nosological forms of pathology of the dental system	1	-	1		interviews; conference reports
	Preparation of the oral cavity for prosthetics. Methods of anesthesia in the preparation of teeth. The choice of drug and method of anesthesia	-	5	2		interviews; seminar reports; electronic tests; performance of case studies
	Pathology of hard tissues of teeth of carious and non-carious origin. Prosthetic treatment planning	1	-	1		interviews; conference reports
	Defects of hard tissues of teeth. Methods of examination of patients with defects in hard dental tissues. Dental photo protocol when planning prosthetic treatment of patients with defects in dental crowns. Patient examination. Completing medical documentation	-	5	2		interviews; seminar reports; electronic tests; performance of case studies
	Working and auxiliary impressions and modern materials for their taking. Steps for taking an impression. Getting a digital impression. Laboratory scanning of models. Taking impressions with alginate and silicone materials	-	5	2		interviews; seminar reports; electronic tests; performance of case studies
	Inlays. Modern construction materials and methods for manufacturing inlays	1	-	1		interviews; conference reports
	Inlays, indications for use. Modern construction materials and methods for manufacturing inlays Determining the tactics of treating patients using inlays	-	5	2		interviews; seminar reports; electronic tests; performance of case studies

Features of the formation of cavities for inlays, depending on the topography and the size of the defect. Clinical and laboratory stages of making inlays by direct and indirect methods. Preparation of cavities for inlays on gypsum models	-	5	2	interviews; seminar reports; electronic tests; performance of case studies
Veneers. Modern construction materials and methods for the manufacture of veneers	1	-	1	interviews; conference reports
Veneers, indications for use. Characteristics of modern construction materials. Methods for making veneers. Modeling veneers on gypsum models	-	5	2	interviews; seminar reports; electronic tests; performance of case studies
Tooth preparation and clinical and laboratory stages of veneer manufacturing. Modern materials and methods for fixing veneers. Preparation of cavities for veneers on plaster models	-	5	2	interviews; seminar reports; electronic tests; performance of case studies
1.2. Prosthetic treatment of dental crown defects with artificial crowns	6	30	16	
Metal stamped, acrylic, combined crowns. Indications for use	2	-	1	interviews; conference reports
Metal stamped crowns. Clinical and laboratory stages of manufacturing. Examination of the patient, determination of indications for the manufacture of metal stamped crowns	-	5	2	interviews; seminar reports; electronic tests; performance of case studies
Acrylic crowns. Clinical and laboratory stages of manufacturing. Examination of the patient, determination of indications for the manufacture of acrylic crowns	-	5	2	interviews; seminar reports; electronic tests; performance of case studies
Clinical and laboratory stages of making stamped metal, plastic, combined crowns. Construction materials	2	-	1	interviews; conference reports
Combined crowns, clinical and laboratory stages of manufacturing. Examination of the patient, determination of indications for the manufacture of combined crowns	-	5	2	interviews; seminar reports; electronic tests; performance of case studies
Cast-metal, metal-acrylic, metal-ceramic crowns. The reaction of tooth and periodontal tissues to preparation. Security zones by Abolmasov-Klyuev	1	-	1	interviews; conference reports
Clinical and laboratory stages of manufacturing cast-metal, metal-acrylic, metal-ceramic crowns. Specific features of the preparation of teeth and taking impressions. Method of fitting, sitting and fixation of	-	5	2	interviews; seminar reports; electronic tests; performance of case studies

single crowns. Examination of the patient, determination of indications for the manufacture of cast, metal-acrylic, metal-ceramic crowns						
Non-metal crowns. Characteristics of modern construction materials	1	-	1		interviews; conference reports	
Non-metal crowns. Characteristics of modern construction materials. Methods for manufacturing metal-free crowns (milling, sintering, pressing).	-	5	2		interviews; seminar reports; electronic tests; performance of case studies	
Examination of the patient, determination of indications for the manufacture of metal-free crowns						
Features of tooth preparation for the manufacture of metal-free crowns. Impression materials. Methods for making impressions. Clinical and laboratory stages of manufacturing.	-	5	2		interviews; seminar reports; electronic tests; performance of case studies	
Making impressions from alginate and silicone materials						
1.3. Prosthetic treatment in the complete absence of a tooth crown	4	15	8			
Classification of restorative post constructions	2	-	1		interviews; conference reports	
Restorative post constructions. Indications for use. Requirements for the condition of the root and its surrounding tissues.						
Examination of the patient, determination of indications for the manufacture of various post constructions	-	5	2		interviews; seminar reports; electronic tests; performance of case studies	
Clinical and laboratory stages of manufacturing restorative post constructions. Modern construction materials	2	-	1		interviews; conference reports	
Clinical and laboratory stages of manufacturing restorative post constructions.						
Selection of a treatment plan for patients with a complete absence of a tooth crown with post constructions.	-	5	2		interviews; seminar reports; electronic tests; performance of case studies	
Prosthetic treatment of patients in the absence of a tooth crown with stump root inlays, indications for use. Clinical and laboratory stages of manufacturing stump root inlay structures. Fiberglass posts.						
Selection of a treatment plan. Selection of materials for fixation of fiberglass posts, taking impressions with alginate and silicone materials	-	5	2		interviews; seminar reports; performance of case studies Credit.	

6 semester					
2.	Prosthetic treatment of dentition defects with fixed prostheses	14	80	82	
2.1.	Partial defects of the dentition. Odontoparodontogram. Methods of tooth preparation and impression taking for various fixed prosthetic constructions	5	30	32	
	Partial defects of dentition	1	-	2	interviews; conference reports
	Prosthetics of partial absence of teeth. Clinical picture, classification of dentition defects.	-	5	4	interviews; seminar reports; electronic tests; performance of case studies
	Interpretation of the examination data patients with partial absence of teeth, taking into account the classification of dentition defects	-	5	4	
	Prosthetic treatment of patients with partial absence of teeth with fixed dentures. Methods examination of patients. Indications and contraindications to the choice of construction fixed dentures.	-	5	4	interviews; seminar reports; electronic tests; performance of case studies
	Examination of patients, determination of indications and contraindications for the manufacture bridge dentures	-	5	4	
	Constructions of fixed dentures. Periodontium	2	-	2	interviews; conference reports
	Odontoparodontogram. Justification of the choice of design and abutments in bridge dentures. stamina and reserve forces of the periodontium.	-	5	4	interviews; seminar reports; electronic tests; performance of case studies
	Interpretation of the results of odontoparodontogram and X-ray examination data	-	5	4	
	Bridge (stamped-soldered, combined) dentures	1	-	2	interviews; conference reports
	Clinical and laboratory stages of manufacturing stamped-soldered bridge dentures	-	5	4	interviews; seminar reports; electronic tests; performance of case studies
	Preparation of teeth, taking impressions in the manufacture of bridge dentures (stamped-soldered, cast-metal, combined).	-	5	4	interviews; seminar reports; electronic tests; performance of case studies
	Preparation of teeth for the manufacture of bridge dentures on plaster models	-	5	4	
	The technique of taking impressions for the manufacture of bridge dentures	1	-	2	interviews; conference reports

	The technique of taking impressions for the manufacture of the intermediate part of the bridge dentures. The choice of impression materials depending on the construction materials of the dentures. Taking impressions from alginate and silicone materials	-	5	4	interviews; seminar reports; electronic tests; performance of case studies
2.2	Topic Clinical and laboratory stages of manufacturing bridges from various structural materials	7	40	40	
	Fixation of central occlusion in the manufacture of bridges	1	-	2	interviews; conference reports
	Determination and methods of fixation of central occlusion in the manufacture of bridges.				interviews; seminar reports;
	Determination and fixation of central occlusion in the manufacture of bridges on plaster models	-	5	2	electronic tests; performance of case studies
	Errors and complications in the application and fixation of bridge dentures	1	-	2	interviews; conference reports
	Inspection of structures, final manufacture, application and fixation of bridge dentures.				interviews; seminar reports;
	Tactics of checking the design of bridges. Selection of material for fixation	-	5	4	electronic tests; performance of case studies
	Cast-metal, metal acrylic, metal ceramic dentures	2	-	2	interviews; conference reports
	Clinical and laboratory stages of manufacturing of cast-metal, metal acrylic, metal ceramic dentures	-	5	4	interviews; seminar reports; electronic tests; performance of case studies
	Adhesive bridge dentures	1	-	2	interviews; conference reports
	Adhesive bridge dentures. Modern construction materials for manufacturing and luting. Methods of manufacture and methods of luting.				interviews; seminar reports;
	Selection of construction materials for the manufacture and fixation of adhesive dentures	-	5	4	electronic tests; performance of case studies
	Metal-free bridge dentures	1	-	2	interviews; conference reports
	Modern construction materials and methods of manufacturing metal-free bridge dentures.				interviews; seminar reports;
	Selection of construction materials for the manufacture of metal-free dentures	-	5	4	electronic tests; performance of case studies

Errors and complications in the prosthetic treatment of patients with partial defects of the dentition with bridges	1	-	2	interviews; conference reports
CAD/CAM technologies in fixed dental prosthetics	-	5	4	interviews; seminar reports; electronic tests; performance of case studies
Clinical stages and modern materials for fixing metal-free fixed dentures.	-	5	4	interviews; seminar reports; electronic tests; performance of case studies
Selection of materials for fixing metal-free dentures	-	5	2	interviews; seminar reports; electronic tests; performance of case studies
Errors and complications in the prosthetic treatment of patients with partial defects of the dentition with bridge dentures.	-	5	2	interviews; seminar reports; electronic tests; performance of case studies
Examination of the patient, filling out medical documentation	-	5	2	interviews; seminar reports; electronic tests; performance of case studies
2.3. Dental implantation	2	10	10	
Dental implantation	2	-	2	interviews; conference reports
Types of dental implantation. Indications and contraindications for use.	-	5	4	interviews; seminar reports; electronic tests; performance of case studies
Characteristics of construction materials.	-	5	4	interviews; seminar reports; electronic tests; performance of case studies
Determining the tactics of treating patients with dental implants	-	5	4	interviews; seminar reports; performance of case studies; OSCE
Types of dental implants and abutments.	-	5	4	interviews; seminar reports; performance of case studies; OSCE
Selection of abutments for the manufacture of fixed structures	-	5	4	interviews; seminar reports; performance of case studies; OSCE
Total hours	28	160	128	Exam

INFORMATION AND INSTRUCTIONAL UNIT

LITERATURE

Basic:

1. Prosthetic Dentistry / V. P. Nespriadko [et al.]. – Житомир : Полісся, 2015. – 260 с.

Additional:

2. Fixed dentures. Algorithm of producing = Клинико-лабораторные этапы изготовления несъемных зубных протезов / С. А. Наумович [и др.]. – Мн. : БГМУ, 2018. – 30 с.

3. Fundamentals of fixed prosthodontics / Shillingburg, Hebert T. [и др.]. - Chicago [etc.] : Quintessence Publishing Co, 2012. - 574 p.

METHODOLOGICAL RECOMMENDATIONS FOR THE ORGANIZATION AND PERFORMANCE OF STUDENT INDEPENDENT WORK IN THE ACADEMIC DISCIPLINE

The time allotted for independent work can be used by students to:

- preparation for lectures and practical classes;
- preparation for tests and exams in the academic discipline;
- study of topics (questions) submitted for independent study;
- performance of case studies;
- performance of research and creative tasks;
- preparation of thematic reports, abstracts, presentations;
- implementation of practical tasks;
- note-taking of educational literature;
- preparation of reports;
- compiling a review of scientific literature on a given topic;
- design of information and demonstration materials (stands, posters, graphics, tables, newspapers, etc.);
- production of models, laboratory teaching aids;
- compiling a thematic selection of literary sources, internet sources.

LIST OF AVAILABLE DIAGNOSTIC TOOLS

The following forms are used for competences assessment:

1. Oral form:

- interviews;
- seminar reports;
- conference reports.

Written form:

- written survey

Oral-written form:

- performance of case studies
- credits;
- examinations;

2. Technical form:

electronic tests.

3. Simulation form:

objective structured clinical examination.

LIST OF AVAILABLE TEACHING METHODS

Linear (traditional) method (lecture, practical exercises);

active (interactive) methods:

PBL (Problem-Based Learning);

CBL (Case-Based Learning);

LIST OF PRACTICAL SKILLS

1. Preparation of hard dental tissues for the manufacture of inlays.
2. Preparation of hard dental tissues for the manufacture of veneers.
3. Preparation of hard dental tissues for the manufacture of stamped crowns.
4. Preparation of hard dental tissues for the manufacture of cast crowns.
5. Preparation of hard dental tissues for the manufacture of PFM crowns.
6. Preparation of hard dental tissues for the manufacture of all- ceramic crowns.
7. Preparation of the stump and preparation the root canal for the manufacture of post structures.
8. Modeling of metal cast root post on single-rooted and multi-rooted teeth.
9. Impression taking with alginate.
10. Impression taking with silicone (dual impression).
11. Fitting and fixation of stamped crowns.
12. Fitting and fixation of cast crowns.
13. Fitting and fixation of PFM crowns.
14. Fitting and fixation of all- ceramic crowns.
15. Determination and fixation of central occlusion in the manufacture of bridge prostheses.
16. Design verification of stamped-soldered bridges.
17. Design verification of cast metal bridges.
18. Design verification of PFM bridges.
19. Design verification of all- ceramic bridges.
20. Fixation of bridges made of various construction materials.

LIST OF EQUIPMENT USED

1. Training place for a dentist (table, chair).
2. Dental unit with lamp and spittoon.
3. Tool table, with a fixed rigid container for class B waste.
4. Dental chair (for a doctor).
5. Trolley with consumables and containers for disposal.
6. Sink.
7. Class A waste container with a volume of 10 liters.
8. Container for collecting class B waste with a volume of 10 liters.

9. A set of instruments in imitation of sterile packaging (tray - 1 pc., dental tweezers - 2 pcs., dental mirror - 1 pc., dental probe - 1 pc., excavator - 1 pc., spatula - 1 pc., trowel - 1 piece, angle probe - 1 piece.
10. A set of cutting instruments for tooth preparation using a turbine handpiece.
11. Paper palette for mixing of the second layer of silicone mass.
12. Rubber flask for mixing of impression materials.
13. Spatula for impression materials mixing.
14. Dental spatula
15. Impression trays for the upper and lower jaw.
16. Scalpel.
17. Retraction cord.
18. Silicone impression material.
19. Alginate impression material.
20. Gypsum.

LIST OF LECTURES

5th semester

1. Aims, objectives of the discipline «Non-removable prosthetics». Principles of medical ethics and deontology. The main nosological forms of pathology of the dental system
2. Pathology of hard tissues of teeth of carious and non-carious origin. Prosthetic treatment planning.
3. Inlays. Modern construction materials and methods for manufacturing inlays. Inlays, indications for use. Modern construction materials and methods for manufacturing inlays. Determining the tactics of treating patients using inlays
4. Veneers. Modern construction materials and methods for the manufacture of veneers
5. Metal stamped, acrylic, combined crowns. Indications for use
6. Clinical and laboratory stages of making stamped metal, plastic, combined crowns. Construction materials
7. Cast-metal, metal-acrylic, metal-ceramic crowns. The reaction of tooth and periodontal tissues to preparation. Security zones by Abolmasov-Klyuev
8. Non-metal crowns. Characteristics of modern construction materials.
9. Classification of restorative post constructions.
10. Clinical and laboratory stages of manufacturing restorative post constructions. Modern construction materials.

6th semester

1. Partial defects of dentition.
2. Constructions of fixed dentures. Periodontium
3. Bridge (stamped-soldered, combined) dentures
4. The technique of taking impressions for the manufacture of bridge dentures.
5. Fixation of central occlusion in the manufacture of bridges
6. Errors and complications in the application and fixation of bridge dentures
7. Cast-metal, metal acrylic, metal ceramic dentures

8. Adhesive bridge dentures.
9. Metal-free bridge dentures.
10. Errors and complications in the prosthetic treatment of patients with partial defects of the dentition with bridges.
11. Dental implantation.

LIST OF PRACTICAL STUDIES

5th semester

1. Preparation of the oral cavity for prosthetics. Methods of anesthesia in the preparation of teeth.
The choice of drug and method of anesthesia.
2. Defects of hard tissues of teeth. Methods of examination of patients with defects in hard dental tissues. Dental photo protocol when planning prosthetic treatment of patients with defects in dental crowns.
Patient examination. Completion of medical documentation.
3. Working and auxiliary impressions and modern materials for their taking. Steps for taking an impression. Getting a digital impression. Laboratory scanning of models.
Taking impressions with alginate and silicone materials.
4. Inlays, indications for use. Modern construction materials and methods for manufacturing inlays.
Determining the tactics of treating patients using inlays.
5. Features of the formation of cavities for inlays, depending on the topography and the size of the defect. Clinical and laboratory stages of making inlays by direct and indirect methods.
Preparation of cavities for inlays on gypsum.
6. Veneers, indications for use. Characteristics of modern construction materials. Methods for making veneers.
Modeling of veneers on plaster models.
7. Tooth preparation and clinical and laboratory stages of veneers manufacturing. Modern materials and fixation methods of veneers.
Preparation of cavities for veneers on plaster models.
8. Metal stamped crowns. Clinical and laboratory stages of manufacturing.
Examination of the patient, determination of indications for the manufacture of metal stamped crowns.
9. Acrylic crowns. Clinical and laboratory stages of manufacturing.
Examination of the patient, determination of indications for the manufacture of acrylic crowns.
10. Combined crowns, clinical and laboratory stages of manufacturing.
Examination of the patient, determination of indications for the manufacture of combined crowns.
11. Clinical and laboratory stages of manufacturing cast-metal, metal-acrylic, metal-ceramic crowns. Specific features of the preparation of teeth and taking impressions. Method of fitting, sitting and fixation of single crowns.

Examination of the patient, determination of indications for the manufacture of cast, metal-acrylic, metal-ceramic crowns.

12. Non-metal crowns. Characteristics of modern construction materials. Methods for manufacturing metal-free crowns (milling, sintering, pressing).

Examination of the patient, determination of indications for the manufacture of metal-free crowns.

13. Features of tooth preparation for the manufacture of metal-free crowns. Impression materials. Methods for making impressions. Clinical and laboratory stages of manufacturing.

Making impressions from alginate and silicone materials. Post structures. Indications for use. Requirements for the condition of the root and its surrounding tissues.

14. Restorative post constructions. Indications for use. Requirements for the condition of the root and its surrounding tissues.

Examination of the patient, determination of indications for the manufacture of various post constructions.

15. Clinical and laboratory stages of manufacturing restorative post constructions.

Selection of a treatment plan for patients with a complete absence of a tooth crown with post constructions.

16. Prosthetic treatment of patients in the absence of a tooth crown with stump root inlays, indications for use. Clinical and laboratory stages of manufacturing stump root inlay structures. Fiberglass posts.

Selection of a treatment plan. Selection of materials for fixation of fiberglass posts, taking impressions with alginate and silicone materials.

6th semester

1. Prosthetics of partial absence of teeth. Clinical picture, classification of dentition defects.

Interpretation of the examination data patients with partial absence of teeth, taking into account the classification of dentition defects.

2. Prosthetic treatment of patients with partial absence of teeth with fixed dentures. Methods examination of patients. Indications and contraindications to the choice of construction fixed dentures.

Examination of patients, determination of indications and contraindications for the manufacture bridge dentures.

3. Odontoparodontogram. Justification of the choice of design and abutments in bridge dentures. stamina and reserve forces of the periodontium.

Interpretation of the results of odontoparodontogram and X-ray examination data.

4. Clinical and laboratory stages of manufacturing stamped-soldered bridges.

5. Preparation of teeth, taking impressions in the manufacture of bridge dentures (stamped-soldered, cast-metal, combined).

Preparation of teeth for the manufacture of bridge dentures on plaster models.

5. Preparation of teeth, taking impressions in the manufacture of bridge dentures (stamped-soldered, cast-metal, combined).

Preparation of teeth for the manufacture of bridge dentures on plaster models.

6. The technique of taking impressions for the manufacture of the intermediate part of the bridge dentures. The choice of impression materials depending on the construction materials of the dentures.

Taking impressions from alginate and silicone materials.

7. Determination and methods of fixation of central occlusion in the manufacture of bridges.

Determination and fixation of central occlusion in the manufacture of bridges on plaster models.

8. Inspection of structures, final manufacture, application and fixation of bridge dentures.

Tactics of checking the design of bridges. Selection of material for fixation.

9. Clinical and laboratory stages of manufacturing of cast-metal, metal acrylic, metal ceramic dentures.

10. Adhesive bridge dentures. Modern construction materials for manufacturing and luting. Methods of manufacture and methods of luting.

Selection of construction materials for the manufacture and fixation of adhesive dentures.

11. Modern construction materials and methods of manufacturing metal-free bridge dentures.

Selection of construction materials for the manufacture of metal-free dentures.

12. CAD / CAM technologies in fixed dental prosthetics.

13. Clinical stages and modern materials for fixing metal-free fixed dentures.

Selection of materials for fixing metal-free dentures.

14. Errors and complications in the prosthetic treatment of patients with partial defects of the dentition with bridge dentures.

Examination of the patient, filling out medical documentation.

15. Types of dental implantation. Indications and contraindications for use. Characteristics of construction materials.

Determining the tactics of treating patients with dental implants.

16. Types of dental implants and abutments.

Selection of abutments for the manufacture of fixed structures.

**PROTOCOL OF THE CURRICULUM APPROVAL
BY OTHER DEPARTMENTS**

Title of the discipline requiring approval	Department	Amendments to the curriculum in the academic discipline	Title of the discipline requiring approval
1. Conservative Dentistry	Department of conservative dentistry	No suggestions	№ 18 of 16.05.2023
2. Oral Surgery and Propaedeutics of Maxillofacial Surgical Diseases	Department of Oral Surgery	No suggestions	№ 18 of 16.05.2023

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

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