Federal State Budgetary Educational Institution of Higher Education
"Privolzhsky Research Medical University"
Ministry of Health of the Russian Federation

APPROVED
Vice-Rector for Academic Affairs
_____ E.S. Bogomolova
31 August 2021

WORKING PROGRAM

Name of the academic discipline: **MAXILLOFACIAL ORTHOPEDICS**

Specialty: **31.05.03 - DENTISTRY**

Qualification**: DENTIST**

Department**: ORTHOPEDIC DENTISTRY AND ORTHODONTICS**

Form of study: **FULL-TIME**

Labor intensity of the academic discipline: **108 academic hours**

Nizhny Novgorod
2021

The working program has been developed in accordance with the Federal State Educational Standard for the specialty 31.05.03 «DENTISTRY» approved by Order of the Ministry of Science and Higher Education of the Russian Federation № 984 dated 12.08.2020.

Developers of the working program:

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The program was reviewed and approved at the meeting of the Department of Orthopedic Dentistry and Orthodontics (Protocol № 1 of 30.08.2021).

Head of the Department,
Doctor of Medical Sciences, Associate Professor _____ (Saakyan M.Yu.)

30 August 2021

AGREED
Deputy Head of EMA ph.d. of biology _____ Lovtsova L.V.

30 August 2021

1. The purpose and objectives of mastering the academic discipline — maxillofacial orthopedics

1.1. The purpose of mastering the discipline: (participation in forming the relevant competencies): CC – 1, PC – 6, PC – 7.

1.2. Tasks of the discipline:

To achieve this goal, the following tasks must be solved:

1. to familiarize students with the principles of organization and operation of the clinic of orthopedic dentistry and dental laboratory;
2. to teach the peculiarities of examination of patients with defects and deformities of teeth and dentition, periodontal and TMJ diseases, deformities and defects of the maxillofacial region, pathological conditions of the dental system associated with an anomaly of the development of the dental system;
3. to teach the basics of diagnosis and planning of orthopedic treatment;
4. to teach students the methods of conducting the clinical stages of manufacturing fixed and removable denture structures;
5. to acquaint students with the laboratory stages of manufacturing various fixed and removable dentures;
6. to familiarize with possible complications in orthopedic treatment with fixed and removable dentures and methods of their elimination and prevention.

The objectives of the discipline are also to master the necessary stock of theoretical knowledge and practical skills, the ability to use them in the treatment of patients, knowledge of the fundamental and organizational principles of orthopedic dentistry, dental materials science and dental prosthetic technology, prevention measures and recognition of major dental diseases, possession of clinical methods of treatment of orthopedic patients.

1.3. Requirements to the deliverables of mastering the discipline.

As a result of completing the discipline, the student should

To know:

1.Classification of jaw fractures, clinic and diagnostics.
2.The mechanism of displacement of fragments.
3.Classification of orthopedic devices used for the treatment of jaw fractures.
4.First aid for jaw fractures.
5.Orthopedic treatment of fractures of the upper jaw.
6.Orthopedic treatment of fractures of the lower jaw.
7.Methods of prosthetics of patients with improperly fused fractures and false joints of the lower jaw.
8.Methods of prosthetics prosthetics after resection of the upper jaw.
9.Methods of prosthetics prosthetics after resection of the lower jaw.
10.Features of prosthetics in patients with microstomy.
11.Prosthetics techniques for prosthetics of defects of the hard and soft palate.
12.Methods of prosthetics prosthetics for facial defects.

Be able to:

1. To carry out differential diagnosis of diseases of the maxillofacial region;
2. Get a face mask.
3. To carry out differential diagnostics of deformations of maxillofacial region.
4. To determine the indications for the treatment of each type of deformities of maxillofacial region.
5. To carry out differential diagnosis of TMJ diseases.
6. To carry out modern methods of diagnosis of TMJ diseases.

7. Apply various types of occlusal splints and techniques of selective grinding of teeth.
8. To determine the degree of bone atrophy of toothless jaws.
9. Collect a complete medical history of the patient, including data on the condition of the oral cavity and teeth, conduct a survey of the patient and relatives (collect biological, medical, psychological and social information)
10. Interpret the results of examinations, make a preliminary diagnosis to the patient, outline the scope of additional studies to clarify the diagnosis
11. Formulate a clinical diagnosis
12. To keep medical records of various types of dental outpatient and inpatient institutions
13. Promote a healthy lifestyle,
14. To carry out work on the promotion of dental health aimed at preventing hereditary and congenital diseases
15. Evaluate radiation and ultrasound diagnostics used in dental practice
16. Make a diagnostic impression, fix the bite with occlusive rollers, cast the model
17. Evaluate the effectiveness and safety of the treatment
18. Apply methods of asepsis and antiseptics, medical instruments, medical devices for laboratory diagnostic and therapeutic purposes
19. Work with dental instruments, materials, tools and equipment.
20. Perform application, infiltration, and conduction anesthesia;
21. Read radiographs (sighting, panoramic, orthopantomograms);
22. Get impressions with elastic impression materials, cast models;
23. Determine the central ratio of the jaws;
24. Check the designs of removable dentures;
25. Apply arc, partial and full removable plate prostheses;
26. To store and apply removable plates with bite pads, as well as plates with an inclined plane;
27. Perform correction of all types of prostheses;
28. Work with fast-hardening plastics;
29. To produce wax bases with occlusal rollers;
30. To plaster jaw models into an articulator;
31. To repair and reconstruct removable dentures.

Possess:

1. Obtaining a functional impression from toothless jaws.
2. Determination of the central ratio of the jaws.
3. Carrying out the placement of artificial teeth in full removable dentures.
4. Checking the design of complete removable dentures.
5. Carrying out selective grinding of teeth.
6. Production of working, auxiliary and diagnostic plaster models.
7. Carrying out various methods of parallellometry in the planning of various splinting structures.
8. Production of wax bases with occlusal rollers.
9. Manufacturing of immediate prostheses according to the Oxman method.
10. By applying the facial arc.
11. By plastering models into the articulator.
12. Manufacture various types of occlusal splints.
13. Palpation of the masticatory muscles and TMJ.
14. To make a relaxing tire.
15. Correction of a removable plate prosthesis with complete loss of teeth.
16. By applying a complete removable prosthesis.
17. Methods of maintaining medical accounting and reporting documentation in medical organizations
18. Assessments of the state of dental health of the population of various age and gender groups
19. Methods of general clinical examination of children and adults

20. Clinical methods of examination of the maxillofacial area
21. Interpretation of the results of laboratory, instrumental diagnostic methods in patients of different ages
22. The algorithm of making a preliminary diagnosis to patients and, if necessary, with their subsequent referral for additional examinations and to specialist doctors
23. An algorithm for making a detailed clinical diagnosis of patients
24. The method of reading various types of radiographs
25. Determination of dental indices
26. Methods of differential diagnosis of the main clinical syndromes and diseases of the maxillofacial system;
27. Methods of complex treatment of patients based on a rational and economical approach in outpatient settings, taking into account the age, severity of the disease, the presence of concomitant pathology;
28. Primary and secondary prevention, rehabilitation of patients;

2. Position of the academic discipline in the structure of the General Educational Program of Higher Education (GEP HE) of the organization

2.1. The discipline of maxillofacial orthopedics refers to the core part of Block 1 of the General Educational Program of Higher Education (GEP HE) of the organization.

Orthopedic dentistry is a profile discipline of paramount importance. The main task of the Department of Orthopedic Dentistry is the theoretical and practical training of a doctor who is able to solve issues of prevention, diagnosis and treatment of dental diseases. The general preventive orientation of the orthopedic dentist will be most fully disclosed to the student during the general medical examination of the population, which allows you to get acquainted with all dental diseases, their local and general treatment, preventive manipulations, as well as recommendations and tips that certainly accompany the therapeutic and preventive activities of the doctor.

Based on the knowledge gained by the student at the general clinical, general biological, dental departments and the Department of Children's Diseases, to teach students the peculiarities of prevention, clinic, diagnosis and treatment of dental diseases. To prepare a doctor who is able to work in a medical and preventive institution after the internship.

Maxillofacial orthopedics includes such a volume of theoretical material and practical skills that allows you to observe the principle of continuity of clinical training in the main sections of the discipline (prevention, therapy, orthodontics, surgery) and related specialties, providing an opportunity to teach, treat, study and put into practice new methods of prevention, treatment and medical examination.

Maxillofacial orthopedics is used in the formation of the content of the final state certification in the specialty dentistry.

The discipline is taught in 10 semester of study.

2.2. The following knowledge, skills and abilities formed by previous academic disciplines are required for mastering the discipline:

human anatomy, radiation diagnostics and therapy, histology with embryology, pathological anatomy and physiology, normal physiology, pharmacology, microbiology, propaedeutic dentistry, therapeutic dentistry, surgical dentistry.

2.3. Mastering the discipline is required for forming the following knowledge, skills and abilities for subsequent academic disciplines:
therapeutic dentistry, surgical dentistry, orthodontics, pediatric dentistry, maxillofacial surgery.

3. Deliverables of mastering the academic discipline and metrics of competence acquisition

Mastering the discipline aims at acquiring the following universal (UC) or/and general professional (GPC) or/and professional (PC) competencies

p/no.	Competence code	The content of the competence (or part of it)	Code and name of the competence acquisition metric	As a result of mastering the discipline, the students should:		
				To know	Be able to	possess
1.	UC-1	Is able to carry out a critical analysis of problem situations based on a systematic approach, develop a strategy of action	IUC 1.1 Knows: methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis IUC 1.2 is able to: gain new knowledge based on analysis, synthesis, etc.; collect data on complex scientific problems related to the professional field; search for information and solutions based on actions, experiment and experience IUC 1.3 Has practical experience: research of the problem of professional activity with the use of analysis, synthesis and other methods of intellectual activity; development of an action strategy for solving professional problems	Methods of information analysis and synthesis.	Think abstractly, analyze and synthesize information.	Abstract thinking, analysis and synthesis of the received information.
2.	PC -6	Readiness to collect, analyze complaints and other information from the patient (relatives/ legal representatives), his	IPC 6.1 Knows: The methodology of collecting complaints and anamnesis from patients (their legal representatives). Methods of physical examination of patients (examination, palpation, percussion, auscultation). The procedure for providing medical care to adults with dental diseases	International Statistical Classification of Diseases.	Apply the International Statistical Classification of Diseases	The methodology for determining the main pathological conditions and syndromes in patients in accordance

		anamnesis data, interpretation of examination results, laboratory, instrumental, pathoanatomic and other studies in order to recognize the condition or establish the presence or absence of dental disease, symptoms, syndromes of dental diseases, establishment of nosological forms in accordance with International statistical classification of diseases and health-related problems and other regulatory documents of the Ministry of Health of the Russian Federation (Procedure for medical care, Standard of Medical Care, Clinical recommendations on medical care, etc.)	The procedure for providing medical care to children with dental diseases Clinical recommendations on the provision of medical care to patients with dental diseases Standards of medical care IPC 6.2. Can: interpret the results of examination, laboratory, instrumental, pathoanatomic and other studies in order to recognize the condition or establish the presence or absence of dental disease, symptoms, syndromes of dental diseases, the establishment of nosological forms in accordance with the International Statistical Classification of Diseases and Health-related Problems and other regulatory documents of the Ministry of Health of the Russian Federation (Procedure for medical care, Standard of medical care, Clinical recommendations on the provision of medical care, etc.) Develop a treatment plan for children and adults with dental diseases in accordance with the procedures for providing medical care, clinical recommendations, taking into account the standards of medical care. IPC 6.3 Has practical experience: interpretation of the results of examination, laboratory, instrumental, pathoanatomic and other studies in order to recognize the condition or establish			with the International Statistical Classification of Diseases.

			the presence or absence of dental disease, symptoms, syndromes of dental diseases, the establishment of nosological forms in accordance with the International Statistical Classification of Diseases and Health-related Problems, and other regulatory documents of the Ministry of Health of the Russian Federation (Procedure for medical care, Standard of medical care, Clinical recommendations on the provision of medical care, etc.) Development of a treatment plan for children and adults with dental diseases, taking into account the diagnosis, age and clinical picture in accordance with the current procedures for providing medical care, clinical recommendations, taking into account the standards of medical care			
3.	PC -7	The ability to determine the tactics of management of patients with various dental diseases in accordance with Clinical recommendations and other regulatory documents of the Ministry of Health of the Russian Federation in outpatient and day hospital conditions,	IPC 7.1 Knows: Methods of drug and non-drug treatment, medical indications for the use of medical devices for dental diseases Groups of drugs used to provide medical care in the treatment of dental diseases; the mechanism of their action, medical indications and contraindications to the appointment; compatibility, possible complications, side effects, adverse reactions, including serious and unforeseen Principles, techniques and methods of anesthesia, selection of the type of local anesthesia in the treatment	Tactics of management of patients with diseases of the dental system.	To determine the tactics of management of patients with diseases of the dental system.	Tactics of management of patients with diseases of the dental system.

		taking into account the age of the patient.	of dental diseases Methods of preventing or eliminating complications, side effects, adverse reactions, including serious and unforeseen, that occurred during the examination or treatment of patients with diseases of the teeth, pulp, periodontal, periodontal, oral and lip mucosa Materials science, technologies, equipment and medical products used in dentistry Anatomy of the head, maxillofacial region, features of blood supply and innervation; structure of teeth; histology and embryology of the oral cavity and teeth, the main disorders of embryogenesis IPC 7.2. Can: Develop a treatment plan for children and adults with dental diseases in accordance with the procedures for providing medical care, clinical recommendations, taking into account the standards of medical care To select and prescribe medicines, medical devices (including dental materials), dietary nutrition, therapeutic and wellness regimen for the treatment of children and adults with dental diseases in accordance with the current procedures for providing medical care, clinical recommendations, taking into account the standards of medical care To determine medical indications and contraindications to local anesthesia techniques of the			

			maxillofacial region To carry out local anesthesia (application, infiltration, conduction) in children and adults with dental diseases Perform medical interventions, including therapeutic, in children and adults with dental diseases on an outpatient basis (excluding repeated endodontic treatment): - individual oral and dental hygiene training, selection of oral hygiene products and items - controlled teeth cleaning - professional oral and dental hygiene - injection of drugs in the maxillofacial region - local application of remineralizing drugs in the tooth area - deep fluoridation of tooth enamel - sealing of the tooth fissure with a sealant - professional teeth whitening - grinding of hard tooth tissues - restoration of the tooth with a filling using dental cements, chemical curing materials, photopolymers -restoration of teeth with violation of the contact point - restoration of the tooth with filling material using anchor pins - applying a devitalizing paste - pulpotomy (amputation of the crown pulp) - pulp extirpation - instrumental and medical treatment of a well-traversed root canal - temporary filling of the			

			root canal with a drug - filling of the root canal of the tooth with paste, gutta-percha pins - removal of supergingival and subgingival dental deposits in the tooth area (by manual method) - ultrasound removal of supra-gingival and subgingival dental deposits in the tooth area - closed curettage for periodontal diseases in the tooth area - application of a therapeutic bandage for periodontal diseases in the area of one jaw - prescribing drug therapy for diseases of the oral cavity and teeth - appointment of dietary therapy for diseases of the oral cavity and teeth Perform medical interventions, including surgical, in children and adults with dental diseases on an outpatient basis (excluding the removal of retentive and dystopian teeth): - tooth extraction - removal of a temporary tooth - permanent tooth removal - opening and drainage of an odontogenic abscess To carry out step-by-step sanitation of the oral cavity (excluding sanitation of the oral cavity in children in the conditions of an anesthetic manual) Perform medical interventions, including orthopedic, in adults with dental diseases on an outpatient basis (excluding prosthetics on dental implants, technologies for			

			automated manufacturing of orthopedic structures, complete removable plate and clasp prostheses): - obtaining anatomical and functional impressions - restoration of the tooth with a crown - restoration of the integrity of the dentition with fixed bridges - prosthetics with partial removable plate prostheses - correction of removable orthopedic construction - removal of a non-removable orthopedic structure Interpret the results of X-ray examinations of the maxillofacial region To consult children and adults with diseases of the mucous membrane of the mouth and lips, to determine indications for referral to specialist doctors Prevent or eliminate complications, side effects, undesirable reactions, including unforeseen ones, resulting from diagnostic or therapeutic manipulations, the use of medicines and (or) medical devices, non-drug treatment IPC 7.3 Has practical experience: Selection and appointment of medicines, medical devices (including dental materials) for the treatment of dental diseases in children and adults in accordance with the current procedures for the provision of medical care, clinical recommendations, taking into account the standards of medical care Prescribing dietary nutrition, therapeutic and			

			health regime for the treatment of dental diseases in children and adults in accordance with the current procedures for providing medical care, clinical recommendations, taking into account the standards of medical care Performing medical interventions in children and adults with dental diseases in accordance with the current procedures for providing medical care, clinical recommendations, taking into account the standards of medical care Evaluation of the results of medical interventions in children and adults with dental diseases Selection of the type and implementation of local anesthesia (application, infiltration, conduction) in children and adults with dental diseases Evaluation of the effectiveness and safety of the use of medicines, medical devices and non-drug treatment in children and adults with dental diseases Counseling of children and adults with diseases of the mucous membrane of the mouth and lips, determining indications for referral to specialist doctors Selection and appointment of medicines and medical devices, taking into account the diagnosis, age and clinical picture of dental disease in accordance with the procedures for providing medical care, clinical recommendations, taking into account the standards of medical care			

			Determination of methods of administration, regimen and dose of drugs Selection and appointment of non-drug treatment for children and adults with dental diseases in accordance with the procedures for providing medical care, clinical recommendations, taking into account the standards of medical care Prevention and treatment of complications, side effects, adverse reactions, including unforeseen ones, resulting from diagnostic or therapeutic manipulations, the use of medicines and (or) medical devices, non-drug treatment at a dental appointment Providing medical care to children and adults with sudden acute diseases, conditions, exacerbation of chronic diseases without obvious signs of a threat to the patient's life in an urgent form The use of medicines and medical devices in the provision of emergency medical care			

4. Sections of the academic discipline and competencies that are formed when mastering them

n/a	Competence code	Section name of the discipline	The content of the section in teaching units
1	UK-1, PC-6, PC-7	Maxillofacial orthopedics	Classification of jaw fractures, clinic and diagnosis. The mechanism of displacement of fragments. Classification of orthopedic devices used for the treatment of jaw fractures. First aid for jaw fractures. Orthopedic treatment of fractures of the upper jaw. Orthopedic treatment of fractures of the lower jaw. Prosthetics of patients with improperly fused fractures and false joints of the lower jaw. Prosthetics after resection of the upper jaw. Prosthetics after resection of the lower jaw. Features of prosthetics in patients with microstomy. Prosthetics of defects of the hard and soft palate. Prosthetics for facial defects.

5. Volume of the academic discipline and types of academic work

Type of educational work	Labor intensity		Labor intensity by semester (AH)						
	volume in credit units (CU)	volume in academic hours (AH)	4	5	6	7	8	9	10
Classroom work, including	1,83	66							**66**
Lectures (L)	0,39	14							**14**
Laboratory practicum (LP)*									
Practicals (P)	1,44	52							**52**
Seminars (S)									
Student's individual work (SIW)	1,17	42							**42**
Mid-term assessment									
Credit/exam *(specify the type)*									
TOTAL LABOR INTENSITY	3	108							108

6. Content of the academic discipline

6.1. Sections of the discipline and types of academic work

№	Name of the section of the academic discipline	Types of academic work* (in AH)					
		L	LP	P	S	SIW	total
1	Maxillofacial orthopedics	14		52		42	108
	total	14		52		42	108

* - L – lectures; LP – laboratory practicum; P – practicals; S – seminars; SIW – student's individual work.

6.2. Thematic schedule of educational work types:

6.2.1 Thematic schedule of lectures

№	Name of lecture topics	Volume in AH						
		Semester 4	Semester 5	Semester 6	Semester 7	Semester 8	Semester 9	Semester 10
1	Etiology, classification, clinic and orthopedic treatment of fractures of the upper and lower jaw.							2
2	Orthopedic treatment after resection of the upper jaw, features of patient management.							2
3	Orthopedic treatment after mandibular resection, features of patient management.							2
4	Etiology, clinic and orthopedic treatment of patients with false joints of the lower jaw.							2

5	Etiology, clinic and orthopedic treatment of patients with improperly fused fractures of the lower jaw.							2
6	Etiology, clinic, pathogenesis and prosthetics of facial defects.							2
7	Etiology, classification, clinic and orthopedic treatment of defects of the hard and soft palate.							2
	TOTAL (total - 14 AH)							14

6.2.2. The thematic plan of laboratory practicums

Laboratory workshops on maxillofacial orthopedics are not provided by the main educational program of higher education

6.2.3. Thematic plan of practicals

№	Name of the topics of practicals	Volume in AH						
		Semester 4	Semester 5	Semester 6	Semester 7	Semester 8	Semester 9	Semester 10
1	Classification of jaw fractures, clinic and diagnosis. The mechanism of displacement of fragments. Instruction on occupational safety and fire safety. Classification of orthopedic devices used for the treatment of jaw fractures. Practical part: admission of patients, diagnosis, documentation of the primary patient, reading radiographs, obtaining anatomical impressions with alginate material, production of diagnostic models of jaws.							5
2	First aid for jaw fractures. Practical part: reading radiographs, ligature binding of teeth on a phantom, applying a chin sling.							5
3	Orthopedic treatment of fractures of the upper jaw. Practical part: obtaining anatomical impressions with alginate material, planning splinting devices of the upper jaw on phantom models.							5
4	Orthopedic treatment of fractures of the lower jaw. Practical part: obtaining anatomical impressions with alginate material, planning splinting devices of the lower jaw on phantom models.							5
5	Prosthetics of patients with improperly fused fractures and false joints of the lower jaw. Practical part: manufacturing of the hinge according to Gavrilov.							5

6	Features of orthopedic treatment of patients with microstomy. Practical part: making an individual spoon, obtaining anatomical impressions with alginate impression material.							5
7	Prosthetics after resection of the upper jaw. Methods and features of manufacturing the resection part of the prosthesis. Practical part: planning of apparatus designs on phantom models of the upper jaw, carrying out phantom resection.							5
8	Prosthetics after resection of the lower jaw. Features of manufacturing resection prostheses for resection of the chin, half and entire lower jaw. Practical part: planning of apparatus designs on phantom models of the mandible, carrying out phantom resection.							5
9	Prosthetics of defects of the hard and soft palate. Practical part: making a wax reproduction of a solid palate obturator on a phantom model.							4
10	Prosthetics for facial defects. The practical part: removing the face mask, getting a face model.							4
11	Combined prosthetics of the face and jaws. The practical part: removing the face mask, obtaining a collapsible face model. Planning of a combined prosthesis on a model.							4
	TOTAL (total - 52 AH)							52

6.2.4. Thematic plan of seminars: not provided by the main educational program of higher education.

6.2.5. Types and topics of student's individual work (SIW)

p/no.	Types and topics of SIW	Volume in AH						
		4	5	6	7	8	9	10
1	Work with lecture material, providing for the study of lecture notes and educational literature, solving situational problems.							20
2	Search and review of literature and electronic sources of information on an individually given course problem,							10

	writing an abstract on a given problem, preparing for discussion and control work.							
3	Writing medical records, working with electronic educational resources posted on the educational portal of the Academy.							12
	TOTAL (total 42 AH)							42

7. Types of assessment formats for ongoing monitoring and mid-term assessment

During classes, only the current monitoring of academic performance is carried out.
The following methods of control are used for the current control of academic performance at the department:

- control works;
- individual survey;
- testing;
- writing essays;
- solving situational problems

7.1. Forms of current control, types of evaluation tools:

№	Semester No.	Types of control		Name of section of academic discipline	Competence codes	Assessment formats		
						types	number of test questions	number of test task options
1.		Current monitoring	Control of mastering the topic	Maxillofacial orthopedics	UK-1, PC-6, PC-7	Test tasks	20	220
						Testing of practical skills	11	11
						Report	1	1
						Interview	11	33
						Situational tasks	2	10
			Monitoring the student's individual work			Writing a fragment of the medical history	1	1

Examples of evaluation tools:

Example of test tasks:

A SERVICEMAN WITH A FRACTURE OF THE LOWER JAW IS PROVIDED WITH QUALIFIED ASSISTANCE AT THE OMEDB. WHICH OF THESE TRANSPORT TIRES SHOULD BE USED?
chin sling
smooth tire-bracket
tire with spacer
belt bus
tire with hook loops

PATIENT D., 40 YEARS OLD, IS PLANNING FACIAL PLASTIC SURGERY TO ELIMINATE DEFECTS IN THE SOFT TISSUES OF THE FACE AS A RESULT OF A CAR ACCIDENT. WHAT ARE THE MAIN PARTS OF THE FORMING DEVICES THAT ARE USED IN FACIAL PLASTIC SURGERY?
fixing and forming.
reposing and forming
substitutive and formative
guiding and shaping.
the interspersing and forming.

PATIENT D., 40 YEARS OLD, IS PLANNING FACIAL PLASTIC SURGERY TO ELIMINATE DEFECTS IN THE SOFT TISSUES OF THE FACE AS A RESULT OF A CAR ACCIDENT. WHAT ARE THE MAIN PARTS OF THE FORMING DEVICES THAT ARE USED IN FACIAL PLASTIC SURGERY?
fixing and forming.
reposing and forming
substitutive and formative
guiding and shaping.
alternating and forming.

PATIENT A., 47 YEARS OLD, COMPLAINS OF NASAL TWANG, THE IMPOSSIBILITY OF A FULL MEAL, ITS LOSS THROUGH THE NOSE. OBJECTIVELY: ALL TEETH ARE PRESENT. THE BITE IS ORTHOGNATHIC, THE MUCOUS MEMBRANE IS UNCHANGED. A POST-TRAUMATIC TISSUE DEFECT WAS DETECTED ON THE HARD AND SOFT PALATE. WHAT KIND OF PROSTHESIS DESIGN SHOULD BE MADE? the
Kez obturator
the Shildsky obturator
the Suersen obturator
protective palatal plate
Ilina's obturator-Markosyan

PATIENT A., 49 YEARS OLD., BILATERAL FRACTURE N / H IN THE AREA OF 44 34 TEETH, THE REMAINING CHEWING TEETH ARE MISSING, TOOTHLESS FRAGMENTS ARE NOT DISPLACED, BUT MOBILE. WHICH ORTHOPEDIC DEVICE IS ADVISABLE TO USE FOR IMMOBILIZATION OF FRAGMENTS?
shin Vankevich with pelots.
Rudko apparatus

the Limberg tire
the Petrosov apparatus
the Zbarzha apparatus.

Example of situational tasks:

Situational task № 1

A 38-year-old patient turned to the orthopedic dentistry clinic in connection with the upcoming resection of the right half of the upper jaw and removal of the right eyeball. An external examination revealed a deformity of the upper jaw on the right. When examining the oral cavity: the teeth are stable, the condition of the marginal periodontal teeth is normal. On the lower jaw on the right there is a stamped–soldered bridge prosthesis with support for 44, 47; on the left there is a single stamped crown for 37. The bite is orthognathic.

Questions: 1. What orthopedic treatment is indicated for this patient?

1. The peculiarity of fixation of the upper jaw prosthesis.

Situational task № 2

A patient came to the clinic of orthopedic dentistry with complaints of a violation of the function of chewing and speech. From the anamnesis, it was established that 4 years ago she underwent surgery for a malignant neoplasm of the tongue. The postoperative scar led to a narrowing of the oral slit. She underwent a course of radiation therapy. An external examination revealed the presence of a scar deforming the mouth opening. Mouth opening is limited to 17 mm. It was found that the patient has a complete loss of teeth of the upper and lower jaws. The toothless alveolar process of the upper jaw is moderately atrophied, and the atrophy of the alveolar part is pronounced on the lower jaw. The mucous membrane is thin, dry.

Questions:

1. Make a diagnosis.
2. Tell us about the features of orthopedic treatment for microstomy.
3. Choose the design of the prostheses in this clinical situation.

Situational task № 3

The parents of a 5-year-old girl who had no left auricle turned to the clinic of orthopedic dentistry. From the anamnesis it was established that the girl has a congenital anomaly - microtia. An external examination revealed the absence of the left auricle and the external auditory canal.

Questions:

1. Which specialists should be consulted in order to draw up a treatment plan?
2. Is it possible to carry out surgical treatment?
3. Tell us about orthopedic methods of treatment.
4. What clinical stages should be carried out?
5. What are the features of fixation of exoprostheses?

Situational task №4

A 65-year-old patient turned to the clinic of orthopedic dentistry after undergoing surgery - resection of the alveolar part of the lower jaw in the area 4.7; 4.8 about a neoplasm.
When examining the oral cavity: opening the mouth is free. Postoperative defect of the alveolar part of the lower jaw in the 4.4; 4.5; 4.6; 4.7; 4.8, the mucous membrane is pale pink, dry. The preserved teeth are stable, there are facets of erasure on the tubercles and cutting edges of all groups of teeth. The condition of the marginal periodontal teeth corresponds to the age norm. There are no teeth on the lower jaw 4.4; 4.5; 4.6; 4.7; 4.8. The bite is straight.

Questions:

1. Make a diagnosis?
2. Make an orthopedic treatment plan.
3. Tell us about the features of getting an impression
4. Tell us about the mechanisms of fixation of post-resection prostheses.

Situational task № 5

A 47-year-old patient came to the clinic of orthopedic dentistry with complaints about the ingress of fluid from the oral cavity into the nasal cavity when eating. An external examination revealed a deformation of the soft tissues of the face of the oral region. From the anamnesis, it was established that the patient had an injury to the soft tissues of the face and hard palate. When examining the oral cavity: the opening of the mouth is free, on the hard palate in the middle third in the area of the median palatal suture there is an oval-shaped defect of 1.5 x 1 cm with dense painless edges. Teeth 1.5, 1.6, 2.5, 2.6 are missing on the upper jaw. The bite is orthognathic. The preserved teeth are stable. The orthopantomogram revealed the absence of interdental septa, the compact plate was preserved.

Questions:

1. Make a diagnosis.
2. Make an orthopedic treatment plan.
3. Explain the design of the obturating prosthesis.
4. What are the features of obtaining an impression in this case?

8.Educational, methodological and informational support for mastering the academic discipline (printed, electronic publications, the Internet and other network resources)

8.1. Key literature references

n/a	Name according to bibliographic requirements	**Number of instances**	
		in the library	at the department
1	2	3	4
1	Orthopedic Dentistry (faculty course): textbook – 9th ed., reprint. Shcherbakov, L.M. Mishnev; edited by V.N. Trezubov. Moscow:GEOTAR – Media, 2019. – 688 p.	**24 +** electronic resource http://www.studmedlib.ru/ru/book/ISBN9785970445914.html	1

2	Orthopedic dentistry (non-removable dental prosthetics): textbook O.R. Kurbanov, A.I. Abdurakhmanov, S.I., Abakarov. Moscow: GEOTAR – Media, 2015. – 456 p.	73 + electronic resource http://www.studmedlib.ru/book/ISBN9785970432945.html	1
3	Functional occlusion: from the temporomandibular joint to smile planning. Dawson P.E. Publishing house:Practical Medicine Russia, 2016 - 592	1	4
4	Orthopedic dentistry: textbook. – 2nd Edited by E.S. Kalivrajian, I.Yu. Lebedenko, E.A. Bragina, I.P. Ryzhova.ed. Moscow: GEOTAR-Media, 2018. – 800 p.	https://www.rosmedlib.ru/book/ISBN9785970437056.html?custom_pat_file=rosmedlib&custom_pat_id=book.main_frame.(id)&custom_pat_use_id=book.main_frame.(x)&XPartner=medknigaservis	1
5	Diseases of the oral mucosa: a textbook. O. A. Uspenskaya, E. N. Zhulev. NizhGMA Publishing House, 2017. – 504 p.	20	1
6	Treatment of periodontal diseases: a textbook. E. N. Zhulev, N. V. Kruglova, A. V. Kochubeynik NizhGMA Publishing House, 2016. – 160 p.	48	1
7	Orthopedic dentistry. Zhulev E.N. Moscow: Medical Information Agency, 2012 – 824 p.	31 + electronic resource.	1
8	Integrative dentistry (monograph). Zhulev E.N., Troshin V.D. Publishing house NizhGMA – 2014 - 651c.	24 + electronic resource	1

8.2. Further reading

n/a	Name according to bibliographic requirements	**Number of instances**	
		in the library	at the department
1	2	3	4
1.	Preliminary treatment of patients before dental prosthetics. Study guide. Trezubov V. N. 2009, Moscow, publishing house MIA	1	1
2.	Orthopedic treatment of periodontal diseases. The most important issues of dentistry. Kopeikin V. N. M., Triad-X. – 1998	3	1
3.	Orthopedic dentistry (test tasks). Zhulev E.N. Shcherbakov A.S 2004. N.Novgorod publishing house NizhGMA	56	1

4.	Dental ceramics. Current aspects of clinical application. To. Hemmerle. 2011 Moscow: Publishing house "Abc of the dentist"	1	1
5.	Precision and Aesthetics. Clinical and dental stages of dental prosthetics Massironi D., Paschetta R., Romeo D. 2008 Moscow: Publishing house "Abc of the dentist"	1	1
6.	Fundamentals of dental preparation for the manufacture of cast metal, metal-ceramic and ceramic restorations. G. Schillinburg, R. Jacobi, S. Brackett. 2011 Moscow: Publishing house "Abc of the dentist"	1	1
7.	"Dentistry", "New in stomatology", "Quintessence", "Dentart", "STM", "Panorama of orthopedic dentistry", "Clinical dentistry", "Dent-art" Periodical literature – dental journals. Various publishing houses of the cities: Moscow, St. Petersburg and N. Novgorod	One copy for each release period.	0
8.	Fixed prostheses: theory, clinic and laboratory equipment, 5th edition Zhulev E. N. 2010, Moscow, "Medical Information Agency»	24 + electronic resource	1

9.	Partial removable prostheses (theory, clinic and laboratory equipment): A guide for doctors. 2nd edition. Zhulev E.N. 2011. Moscow, "Medical Information Agency	73 + electronic resource	1
10.	Clinic, diagnosis and orthopedic treatment of periodontal diseases. Zhulev E. N. 2003, N.Novgorod, NizhGMA publishing house	53	1
11.	Metal-ceramic prostheses. Study guide. Zhulev E. N. 2004, N. Novgorod, NizhGMA publishing house	57	1
12.	Orthopedic dentistry. The phantom course. Zhulev E.N., Kuryakina N.V., Mitin N.V. Moscow, Medical Information Agency, 2011. – 720 p.	100	1

13.	Maxillofacial orthopedic dentistry Zhulev E.N., Arutyunov S.D., Lebedenko I.Yu. Moscow: Medical Information Agency, 2008 – 156 p.	31 + electronic resource.	1
14.	Fixed prostheses: theory, clinic and laboratory equipment, 5th edition Zhulev E. N. 2010, Moscow, "Medical Information Agency	24 + electronic resource	1
15.	Partial removable prostheses (theory, clinic and laboratory equipment): A guide for doctors. 2nd edition. Zhulev E.N. 2011. Moscow, "Medical Information Agency".	73 + electronic resource	1

8.3. Electronic educational resources for teaching academic subjects
8.3.1. Internal Electronic Library System of the University (IELSU)

Name of the electronic resource	*Brief description (content)*	*Access conditions*	*Number of users*
Internal Electronic Library System (EBS)	The works of the academic staff of the Academy: textbooks and manuals, monographs, collections of scientific papers, scientific articles, dissertations, abstracts of dissertations, patents.	from any computer located on the Internet, using an individual login and password [Electronic resource] – Access mode: http://95.79.46.206/login.php	Not limited

8.3.2. Electronic educational resources acquired by the University

Name of the electronic resource	*Brief description (content)*	*Access conditions*	*Number of users*
Electronic database "Student Consultant"	Educational literature + additional materials (audio, video, interactive materials, test tasks) for higher medical and pharmaceutical education. Publications are structured by specialties and disciplines in accordance with the current Federal State Educational Standards of Higher Education.	from any computer on the Internet, using an individual login and password [Electronic resource] – Access mode: http://www.studmedlib.ru /	General PIM subscription
Electronic library system "Bukap"	Educational and scientific medical literature of Russian publishers, including translations of foreign publications.	from any computer located on the Internet by login and password, from the computers of the Academy. The subscription editions are available for reading. [Electronic resource] – Access mode: http://www.books-up.ru/	General PIM subscription
"Bibliopoisk"	Integrated "single window" search service for electronic catalogs, EBS and full-text databases. The results of a single search in the demo version include documents from domestic and foreign electronic libraries and databases available to the university as part of a subscription, as well as from open access databases.	PIM has access to the demo version of the Bibliopoisk search engine: http://bibliosearch.ru/pimu.	General PIM subscription
Domestic electronic periodicals	Periodicals on medical subjects and on higher school issues	- from the academy's computers on the electronic library platform eLIBRARY.RU -magazines Media Sphere Publishing house - from library computers or provided by by the library at the request of the user [Electronic resource] – Access mode: https://elibrary.ru/	

International scientometric database "Web of Science Core Collection"	Web of Science covers materials on natural, technical, social, and humanitarian sciences; takes into account the mutual citation of publications developed and provided by Thomson Reuters; has built-in capabilities for searching, analyzing, and managing bibliographic information.	Access is free from PIM computers [Electronic resource] – Access to the resource at: http://apps.webofknowledge.com	Access is free from PIM computers

8.3.3 Open access resources

Name of the electronic resource	*Brief description (content)*	*Access conditions*
Federal Electronic Medical Library (FEMB)	It includes electronic analogues of printed publications and original electronic publications that have no analogues recorded on other media (dissertations, abstracts, books, magazines, etc.). [Electronic resource] – Access mode: http://нэб.рф/	from any computer located on the Internet
Scientific Electronic Library eLIBRARY.RU	The largest Russian information portal in the field of science, technology, medicine and education, containing abstracts and full texts of scientific articles and publications. [Electronic resource] – Access mode: https://elibrary.ru /	from any computer located on the Internet.
Open Access Scientific Electronic Library CyberLeninka	Full texts of scientific articles with annotations published in scientific journals of Russia and neighboring countries. [Electronic resource] – Access mode: https://cyberleninka.ru /	from any computer located on the Internet
Russian State Library (RSL)	Abstracts for which there are copyright agreements with permission for their open publication [Electronic resource] – Access mode: http://www.rsl.ru /	from any computer located on the Internet
Legal reference system "Consultant Plus"	Federal and regional legislation, judicial practice, financial advice, comments on legislation, etc. [Electronic resource] – Access mode: http://www.consultant.ru/	from any computer located on the Internet
Official website of the Ministry of Health of the Russian Federation	National clinical guidelines [Electronic resource] – Access mode: cr.rosminzdrav.ru - Clinical recommendations	from any computer located on the Internet

9. Material and technical support for mastering an academic discipline

9.1. List of premises for classroom activities for the discipline

The department is located on the basis of the dental polyclinic of PIMU, where there are: three offices for 4 chairs (40 sq.m.) 2 offices for 3 chairs (18 sq.m each), a functional diagnostics room. Lecture hall with 150 seats.

9.2. List of equipment for classroom activities for the discipline

The staff of the department provides teaching of orthopedic dentistry to students of 2,3,4,5 courses of the Faculty of Dentistry and FOIS, as well as orthodontics to students of the 4th, 5th courses of the Faculty of Dentistry and FOIS.

Lecture classes:

- a set of electronic multimedia presentations,
- an audience equipped with presentation equipment: a projector, a screen, a laptop.

Practical exercises:

Classes at the department are held in two shifts, about 25-30 students are engaged at the same time. The classrooms are equipped with modern equipment, including dental units: Azimut-200 – 8 pieces., CHIRANA- 2 pieces., Siger – 4 pieces. and Stomadent – 1 piece, SIRONA-1 pieces, LEGRIN – 2 pieces, as well as all the equipment, tools and materials necessary for conducting the educational process, ensuring admission patients and the manufacture of prostheses and orthodontic devices.

The department has created a large fund of X-ray studies, including CT of the maxillofacial region and museum exhibits of various types of prostheses and orthopedic devices in all sections of orthopedic dentistry and orthodontics (257 items).

The department has the opportunity to use computing and office equipment for scientific and pedagogical purposes: 8 personal computers, a copier, a scanner, a multimedia projector; the educational and laboratory equipment necessary to ensure the educational process is regularly updated: presentations, museum exhibits, collections of videos on the stages of orthopedic treatment; the department has a video camera, digital the camera. Classrooms are equipped with posters, stands and showcases corresponding to the subject of classes, as well as chalkboards for writing. The department has stands providing information for students of all courses, separate stands are dedicated to the history of the department, scientific achievements in the field of orthopedic dentistry, patents and inventions of employees, there is an information stand for patients.

Internet resources are a significant support in providing educational and methodological materials.

In order to ensure the high quality of the educational process and the development of clinical and practical skills in the orthopedic treatment of various nosological forms of diseases, students master practical skills on 10 dental simulation devices from A-dec.

The department has a modern material base of research, which is replenished with modern equipment:

1) apparatus for the study of microcirculation LAKK-01 (2003), providing research at a high scientific level;
2) diagnostic complex "Neuromyostom" for electromyography (2009),
3) parallellometer (2010).
4) T-scan 3. Apparatus for the diagnosis of occlusive disorders (2017).
5) Cone-beam computed tomography – PAX-I3D. Conducting and analyzing CT scans of the maxillofacial region (2015).
6) Individual articulator SAM-3. Analysis of diagnostic models.

9.3. A set of licensed and freely distributed software, including domestic production

Item no.	Software	number of licenses	Type of software	Manufacturer	Number in the unified register of Russian software	Contract No. and date
1	Wtware	100	Thin Client Operating System	Kovalev Andrey Alexandrovich	1960	2471/05-18 from 28.05.2018
2	MyOffice is Standard. A corporate user license for educational organizations, with no expiration date, with the right to receive updates for 1 year.	220	Office Application	LLC "NEW CLOUD TECHNOLOGIES"	283	without limitation, with the right to receive updates for 1 year.
3	LibreOffice		Office Application	The Document Foundation	Freely distributed software	
4	Windows 10 Education	700	Operating systems	Microsoft	Azure Dev Tools for Teaching Subscription	
5	Yandex. Browser		Browser	«Yandex»	3722	
6	Subscription to MS Office Pro for 170 PCs for FGBOU VO "PIMU" of the Ministry of Health of Russia	170	Office Application	Microsoft		23618/HN10030 LLC "Softline Trade" from 04.12.2020

10. List of changes to the working program (to be filled out by the template)

Federal State Budgetary Educational Institution of Higher Education
"Privolzhsky Research Medical University"
Ministry of Health of the Russian Federation
(FSBEI HE "PRMU" of the Ministry of Health of Russia)

Department of
Orthopedic dentistry and orthodontics

CHANGE REGISTRATION SHEET

working program for the academic discipline
MAXILLOFACIAL ORTHOPEDICS

Field of study / specialty / scientific specialty: **31.05.03 - DENTISTRY**

Training profile: _____
(*name) - for master's degree programs*

Mode of study: FULL-TIME

Position	Number and name of the program section	Contents of the changes made	Effective date of the changes	Contributor's signature
1				

Approved at the department meeting
Protocol No. _____of _____20__

Head of the Department,

Doctor of medical sciences, associate professor
M.Y. Saakyan

_____ (decryption)
(signature)