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**Federal State Autonomous Educational Institution of Higher Education  
PEOPLES' FRIENDSHIP UNIVERSITY OF RUSSIA NAMED AFTER PATRICE  
LUMUMBA  
RUDN University**

**Medical Institute**

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educational division (faculty/institute/academy) as higher education programme developer

**COURSE SYLLABUS**

**Orthodontics and pediatric prosthetics**

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course title

**Recommended by the Didactic Council for the Education Field of:**

**31.05.03 Dentistry**

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field of studies / speciality code and title

**The course instruction is implemented within the professional education  
programme of higher education:**

**Dentistry**

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higher education programme profile/specialisation title

**2024**

## 1. THE GOALS OF MASTERING THE DISCIPLINE

The purpose of mastering the discipline "Orthodontics and pediatric prosthetics" is the preparation of a dentist who has systemic knowledge of the basics and latest achievements of orthodontics to use that knowledge gained in practical and scientific activities.

### Tasks:

- to acquaint the student with the epidemiology, etiology of dentofacial anomalies and deformities;
- to acquaint the student with the development, growth and formation of the jaws and face in general;
- to acquaint the student with the methods of clinical and radiological examination of the dentoalveolar system, classifications of dentoalveolar anomalies;
- to acquaint the student with the methods of preventing the formation of dental anomalies, congenital and hereditary diseases;
- to acquaint the student with the methods of treatment of dentoalveolar anomalies and deformities in various periods of growth and development, as well as in adult patients
- consider the use of various designs of orthodontic appliances.

## 2. REQUIREMENTS to LEARNING OUTCOMES

Mastering the discipline "Orthodontics and pediatric prosthetics" is aimed at developing the following competencies in students:

**UC-1; GPC-1, GPC-2, GPC-4, GPC-5, GPC-9; PC-1, PC-2, PC-5;**

(in accordance with the Federal State Educational Standard of Higher Education (FSES) 3++ 31.05.03 Dentistry).

*Table 2.1. The list of competencies formed by students during the development of the discipline (results of the mastering of the discipline)*

Code and competence	Indicators of Competence Formation (within the framework of this discipline)
<b>UC-1.</b> Being able to implement critical analysis of problem situations based on systems approach, develop an action strategy.	<b>UC-1.1.</b> Analysing the problem situation as a system identifying its components and links between them.
<b>GPC-1.</b> Being able to implement moral standards and legal regulations, ethical and deontological principals in professional activity	<b>GPC-1.1.</b> Observing bases of medical ethics and deontology; legal bases in healthcare; legal aspects of medical practice.
	<b>GPC-1.3.</b> Being experienced in solving standard professional tasks based on the ethical standards and deontological principles when interacting with colleagues and patients (their legal representatives); being aware of legal aspects of medical practice.
<b>GPC-2.</b> Being able to analyse the results of their own professional activity to prevent professional errors	<b>GPC-2.1.</b> Analysing the causes of professional errors, therapeutic failures and conflict situations.
	<b>GPC-2.2.</b> Providing scientific arguments for and implementing recommendations aimed at improving the medical and legal training of dentists, preventing professional errors, adverse outcomes and conflict situations.

	<b>GPC-2.3.</b> Assessing the effectiveness of preventive measures aimed at preventing professional errors, adverse outcomes and conflict situations in dentistry.
<b>GPC-4.</b> Being able to monitor the effectiveness of preventive measures, healthy lifestyle formation and sanitary and hygienic education of the population	<b>GPC-4.1.</b> Analysing the awareness of the population of a healthy lifestyle and medical literacy.
	<b>GPC-4.3.</b> Preparing an oral presentation or a printed text that promotes a healthy lifestyle and increases the literacy of the population concerning dental disease prevention.
<b>GPC-5.</b> Being able to examine patients to determine a diagnosis when solving professional tasks	<b>GPC-5.1.</b> Gathering anamnesis by analysing the patient's complaints, making a physical examination at a dental appointment.
	<b>GPC-5.2.</b> Formulating a preliminary diagnosis and drawing up a plan for laboratory and instrumental examinations of a dental patient.
	<b>GPC-5.3.</b> Compiling medical documentation for a dental patient in accordance with regulatory requirements.
	<b>GPC-5.4.</b> Referring a patient to a laboratory examination in case there are medical indications in accordance with the current procedures for the provision of medical care, clinical guidelines (treatment protocols) on the provision of medical care taking into account the standards of dental care.
	<b>GPC-5.5.</b> Referring a patient to an instrumental examination in case there are medical indications in accordance with the current procedures for the provision of medical care, clinical guidelines (treatment protocols) on the provision of dental care taking into account the standards.
	<b>GPC-5.6.</b> Referring a patient for a consultation with medical specialists in case there are medical indications in accordance with the current procedures for the provision of medical care, clinical guidelines (treatment protocols) on the provision of dental care taking into account the standards.
	<b>GPC-5.8.</b> Conducting differential diagnosis with other diseases/conditions, including the urgent ones.
	<b>GPC-5.9.</b> Making a diagnosis based on the current international statistical classification of diseases and health problems.
<b>GPC-6.</b> Being able to prescribe non-drug and drug treatment, monitor its efficacy and safety when solving professional tasks	<b>GPC-6.1.</b> Developing a plan for dental disease treatment taking into account the diagnosis, age and clinical picture in accordance with the current procedures for the provision of medical care, clinical guidelines (treatment protocols) on the provision of medical care taking into account the medical care standards.
	<b>GPC-6.2.</b> Selecting medical products (including dental materials) for drawing up a comprehensive plan for dental disease treatment. Following up the treatment of a patient.
	<b>GPC-6.3.</b> Assessing the possible side effects of taking medicinal drugs.
	<b>GPC-6.4.</b> Providing medical care to a dental patient in emergency or urgent forms.
	<b>GPC-6.5.</b> Organizing the prevention and treatment of complications, side effects, undesirable reactions, including the unforeseen ones, which can arise from diagnostic or medicinal

	manipulations, use of drugs and (or) medical devices, non-drug treatment at a dental appointment.
	<b>GPC-6.9.</b> Evaluating the efficacy and safety of using medicinal drugs, medical devices and other methods of treatment at a dental appointment.
<b>GPC-9.</b> Being able to assess morpho-functional, physiological conditions and pathological processes in the human body to solve professional tasks	<b>GPC-9.1.</b> Being able to use the algorithm of clinical, laboratory and functional diagnosis in dealing with professional tasks.
	<b>GPC-9.2.</b> Evaluating the results of clinical, laboratory and functional diagnosis in dealing with professional tasks.
	<b>GPC-9.3.</b> Determining morpho-functional, physiological states and pathological processes of the human body.
<b>PC-1.</b> Being able to make an examination of a patient in order to determine a diagnosis.	<b>PC-1.1.</b> Making an initial examination and/or reexamination of a patient in order to make a preliminary diagnosis.
	<b>PC-1.2.</b> Receiving information from patients (their relatives/legal representatives); conducting a questionnaire survey of patients regarding their general health status; identifying concomitant diseases in order to make a preliminary diagnosis.
	<b>PC-1.3.</b> Detecting if patients have dentoalveolar, facial anomalies, deformities and prerequisites for their development, defects in the crowns of teeth and dentition on the basis of the patient examination; laboratory, instrumental, and additional examinations in order to make a preliminary/final diagnosis.
	<b>PC-1.5.</b> Making a preliminary/final diagnosis based on the patient examination; laboratory and instrumental examinations.
	<b>PC-1.6.</b> Making a final diagnosis based on additional examinations of patients.
<b>PC-2.</b> Being able to prescribe, monitor the efficacy and safety of non-drug and drug treatment	<b>PC-2.1.</b> Organizing the provision of emergency and urgent medical care for acute dental diseases, conditions, exacerbation of chronic diseases, which pose a threat to the patient's life, or without obvious signs of a threat to the patient's life.
	<b>PC-2.2.</b> Selecting drugs and medical devices (including dental materials) for dental disease treatment assessing the possible side effects of taking medicinal drugs.
	<b>PC-2.3.</b> Consulting patients on methods for treating dental diseases drawing up a comprehensive treatment plan which justifies the most appropriate tactics and assesses possible complications caused by using this technique.
	<b>PC-2.4.</b> Selecting the type of local anesthesia/anesthesia and assessing the possible complications caused by using it.
	<b>PC-2.5.</b> Conducting a specialized appointment for adults and/or children, monitoring the course of treatment of caries, non-carious dental diseases, pulpitis, periodontal disease, periodontitis, jawbone tissue, peripheral nervous system of the maxillofacial area, temporomandibular joint, salivary glands, diseases of the mucous tunic of mouth, with the exception of precancers, using modern treatment methods approved for use in medical practice.
	<b>PC-2.8.</b> Observing and treating diseases of the oral mucosa, lips, with the exception of a specialized appointment for the treatment of precancers of the oral mucosa and lips, and treatment of

	children with manifestations of viral, bacterial, allergic and other pediatric infections in the oral cavity.
	<b>PC-2.9.</b> Performing a phased sanitation of the oral cavity (excluding the sanitation of children under conditions of anesthesia).
<b>PC-5.</b> Being able to conduct health and hygiene education among the population and medical workers in order to form a healthy lifestyle	<b>PC-5.1.</b> Motivating patients (their relatives/legal representatives) to stick to a healthy lifestyle and give up bad habits.

### 3. THE COURSE IN THE HIGHER EDUCATION PROGRAMME STRUCTURE

Discipline "**Orthodontics and pediatric prosthetics**" refers to the mandatory part, block B1 higher education programme professional cycle of the educational standard of higher professional medical education in the specialty 31.05.03 "Dentistry". Studied in the eighth and ninth semesters.

The basic knowledge necessary to study the discipline is formed:

- in the cycle of humanitarian disciplines (philosophy, bioethics, pedagogy, psychology, jurisprudence, history of medicine, economics, Latin, foreign language);
- in the cycle of natural sciences, medical and biological disciplines, mathematical, (mathematics, physics, computer science, chemistry, biochemistry, biology, anatomy and topographic anatomy of the maxillofacial region, microbiology, virology, immunology, histology, cytology, normal physiology, pathological anatomy, pathophysiology, pharmacology).

The study of the discipline "Orthodontics and pediatric prosthetics" is based on the knowledge and skills previously acquired by students as a result of mastering the previous parts of the educational program, which are necessary for mastering this discipline.

*Table 3.1.* List of Higher Education Program disciplines that contribute to expected learning outcomes

No. p / p	Code and name of competence	Previous disciplines	Subsequent disciplines (groups of disciplines)
<b>Generic competencies</b>			
1	UC-1. Being able to implement critical analysis of problem situations based on systems approach, develop an action strategy.	<ul style="list-style-type: none"> <li>• Medical elementology**;</li> <li>• Otorhinolaryngology;</li> <li>• Philosophy;</li> <li>• History of Medicine;</li> <li>• Pathophysiology - Pathophysiology of the head and neck;</li> <li>• Bioelements in medicine**;</li> <li>• Psychology, pedagogy;</li> <li>• Immunology, clinical immunology;</li> </ul>	<ul style="list-style-type: none"> <li>• Pediatric maxillofacial surgery</li> <li>• Maxillofacial prosthetics</li> <li>• Gnathology and functional diagnosis of the temporomandibular joint;</li> </ul>

		<ul style="list-style-type: none"> <li>• Chemistry of biogenic elements**;</li> <li>• Obstetrics;</li> <li>• Prosthetics for complete absence of teeth;</li> <li>• Pediatric dentistry;</li> <li>• Dental modeling of teeth**;</li> <li>• Human Anatomy - Head and Neck Anatomy;</li> <li>• Dental prosthetics (simple prosthetics);</li> <li>• Dental prosthetics (complex prosthetics);</li> <li>• Mathematics;</li> <li>• Physics;</li> </ul>	
<b>General professional competencies</b>			
2	GPC-1. Being able to implement moral standards and legal regulations, ethical and deontological principals in professional activity	<ul style="list-style-type: none"> <li>• Otorhinolaryngology;</li> <li>• Jurisprudence;</li> <li>• History of Medicine;</li> <li>• Pediatric dentistry;</li> <li>• Organization of general patient care;</li> <li>• Introduction to the specialty;</li> <li>• Introductory practice;</li> <li>• Practice in obtaining primary professional skills in positions of nursing staff (Assistant ward and procedural nurses);</li> </ul>	
3	GPC-2. Being able to analyse the results of their own professional activity to prevent professional errors	<ul style="list-style-type: none"> <li>• Endodontics;</li> <li>• Periodontology;</li> <li>• Oral surgery;</li> <li>• Cariesology and diseases of hard dental tissues;</li> <li>• Local anesthesia and anesthesiology in dentistry;</li> <li>• Pediatric dentistry;</li> </ul>	<ul style="list-style-type: none"> <li>• Maxillofacial and gnathic surgery;</li> <li>• Gerontostomatology and diseases of the oral mucosa;</li> <li>• Implantology and reconstructive surgery of the oral cavity;</li> </ul>
4	GPC-4. Being able to monitor the effectiveness of preventive measures, healthy lifestyle formation and	<ul style="list-style-type: none"> <li>• Prevention and community dentistry;</li> <li>• Hygiene;</li> <li>• Pediatric dentistry;</li> </ul>	

	sanitary and hygienic education of the population		
5	GPC-5. Being able to examine patients to determine a diagnosis when solving professional tasks	<ul style="list-style-type: none"> <li>• Emergency conditions in outpatient dental practice;</li> <li>• Ophthalmology;</li> <li>• Endodontics;</li> <li>• Periodontology;</li> <li>• Oral surgery;</li> <li>• General surgery;</li> <li>• Surgical diseases;</li> <li>• Internal illnesses;</li> <li>• Pathological anatomy - Pathological anatomy of the head and neck;</li> <li>• Obstetrics;</li> <li>• Cariesology and diseases of hard dental tissues;</li> <li>• Local anesthesia and anesthesiology in dentistry;</li> <li>• Prosthetics for complete absence of teeth;</li> <li>• Pediatric dentistry;</li> <li>• Propaedeutics of dental diseases;</li> <li>• Dental prosthetics (simple prosthetics);</li> <li>• Dental prosthetics (complex prosthetics);</li> </ul>	<ul style="list-style-type: none"> <li>• Maxillofacial and gnathic surgery;</li> <li>• Gerontostomatology and diseases of the oral mucosa;</li> <li>• Implantology and reconstructive surgery of the oral cavity;</li> <li>• Pediatric maxillofacial surgery;</li> <li>• Gnathology and functional diagnostics of the temporal mandibular joint;</li> <li>• Maxillofacial prosthetics;</li> </ul>
6	GPC-6. Being able to prescribe non-drug and drug treatment, monitor its efficacy and safety when solving professional tasks	<ul style="list-style-type: none"> <li>• Emergency conditions in outpatient dental practice;</li> <li>• Materials Science;</li> <li>• Endodontics;</li> <li>• Periodontology;</li> <li>• Oral surgery;</li> <li>• General surgery;</li> <li>• Pharmacology;</li> <li>• Surgical diseases;</li> <li>• Internal illnesses;</li> <li>• Immunology, clinical immunology;</li> <li>• Obstetrics;</li> </ul>	<ul style="list-style-type: none"> <li>• Maxillofacial and gnathic surgery;</li> <li>• Clinical pharmacology;</li> <li>• Gerontostomatology and diseases of the oral mucosa;</li> <li>• Implantology and reconstructive surgery of the oral cavity;</li> <li>• Clinical dentistry;</li> <li>• Pediatric maxillofacial surgery;</li> </ul>

		<ul style="list-style-type: none"> <li>• Cariesology and diseases of hard dental tissues;</li> <li>• Prosthetics for complete absence of teeth;</li> <li>• Pediatric dentistry;</li> <li>• Fundamentals of military training.</li> <li>• Life safety;</li> <li>• Dental prosthetics (simple prosthetics);</li> <li>• Dental prosthetics (complex prosthetics);</li> </ul>	<ul style="list-style-type: none"> <li>• Gnathology and functional diagnosis of the temporomandibular joint;</li> <li>• Maxillofacial prosthetics;</li> </ul>
7	GPC-9. Being able to assess morpho-functional, physiological conditions and pathological processes in the human body to solve professional tasks	<ul style="list-style-type: none"> <li>• Ophthalmology;</li> <li>• Oral surgery;</li> <li>• Biological chemistry - Biochemistry of the oral cavity;</li> <li>• Microbiology, virology - Microbiology of the oral cavity;</li> <li>• Pathophysiology - Pathophysiology of the head and neck;</li> <li>• Pathological anatomy - Pathological anatomy of the head and neck;</li> <li>• Radiation diagnostics;</li> <li>• Obstetrics;</li> <li>• Local anesthesia and anesthesiology in dentistry;</li> <li>• Pediatric dentistry;</li> <li>• Human Anatomy - Head and Neck Anatomy;</li> <li>• Histology, embryology, cytology - Histology of the oral cavity;</li> <li>• Normal physiology, physiology of the maxillofacial area;</li> <li>• Topographic anatomy and</li> </ul>	<ul style="list-style-type: none"> <li>• Maxillofacial and gnathic surgery;</li> <li>• Forensic Medicine;</li> <li>• Implantology and reconstructive surgery of the oral cavity;</li> </ul>



		operative surgery of the head and neck;	
<b>Professional competencies</b>			
8	PC-1. Being able to make an examination of a patient in order to determine a diagnosis.	<ul style="list-style-type: none"> <li>• Ophthalmology;</li> <li>• Endodontics;</li> <li>• Periodontology;</li> <li>• Oral surgery;</li> <li>• Otorhinolaryngology;</li> <li>• Pathophysiology - Pathophysiology of the head and neck;</li> <li>• Pathological anatomy - Pathanatomy of the head and neck;</li> <li>• Immunology, clinical immunology;</li> <li>• Chemistry of biogenic elements**;</li> <li>• Radiation diagnostics;</li> <li>• Obstetrics;</li> <li>• Cariesology and diseases of hard dental tissues;</li> <li>• Local anesthesia and anesthesiology in dentistry;</li> <li>• Prosthetics with complete absence of lips;</li> <li>• Pediatric dentistry;</li> <li>• Propaedeutics of dental diseases;</li> <li>• Dental modeling of teeth**;</li> <li>• Three-dimensional computer modeling of teeth**;</li> <li>• Three-dimensional x-ray diagnostic methods in dentistry**;</li> <li>• Fundamentals of military training.</li> <li>• Life safety;</li> <li>• Dental prosthetics (simple prosthetics);</li> <li>• Dental prosthetics (complex prosthetics);</li> </ul>	<ul style="list-style-type: none"> <li>• Maxillofacial and Gnathic Surgery;</li> <li>• Gerontostomatology and diseases of the oral mucosa;</li> <li>• Implantology and reconstructive surgery of the oral cavity;</li> <li>• Oncostomatology and radiation therapy;</li> <li>• Pediatric maxillofacial surgery;</li> <li>• Modern endodontics**;</li> <li>• Gnathology and functional diagnosis of the temporomandibular joint;</li> <li>• Maxillofacial prosthetics;</li> <li>• Aesthetic restoration of teeth**;</li> <li>• Assistant dentist (general practice), incl. research work;</li> </ul>

		<ul style="list-style-type: none"> <li>• Assistant dentist (hygienist);</li> <li>• Assistant dentist (surgeon);</li> </ul>	
9	PC-2. Being able to prescribe, monitor the efficacy and safety of non-drug and drug treatment	<ul style="list-style-type: none"> <li>• Endodontics;</li> <li>• Periodontology;</li> <li>• Innovative technologies in dentistry;</li> <li>• Medical elementology**;</li> <li>• Oral surgery;</li> <li>• Bioelements in medicine**;</li> <li>• Cariesology and diseases of hard dental tissues;</li> <li>• Local anesthesia and anesthesiology in dentistry;</li> <li>• Prosthetics for complete absence of teeth;</li> <li>• Pediatric dentistry;</li> <li>• Propaedeutics of dental diseases;</li> <li>• Organization of general patient care;</li> <li>• Infectious diseases, phthisiology;</li> <li>• Dental prosthetics (simple prosthetics);</li> <li>• Dental prosthetics (complex prosthetics);</li> <li>• Assistant dentist (surgeon);</li> </ul>	<ul style="list-style-type: none"> <li>• Maxillofacial and Gnathic Surgery;</li> <li>• Clinical pharmacology;</li> <li>• Gerontostomatology and diseases of the oral mucosa;</li> <li>• Implantology and oral reconstructive surgery;</li> <li>• Clinical dentistry;</li> <li>• Pediatric maxillofacial surgery;</li> <li>• Modern endodontics**;</li> <li>• Gnathology and functional diagnosis of the temporomandibular joint;</li> <li>• Maxillofacial prosthetics;</li> <li>• Aesthetic restoration of teeth**;</li> <li>• Assistant dentist (general practice), incl. research work;</li> </ul>
10	PC-5. Being able to conduct health and hygiene education among the population and medical workers in order to form a healthy lifestyle	<ul style="list-style-type: none"> <li>• Oral surgery;</li> <li>• Prevention and community dentistry;</li> <li>• Public Health and Healthcare;</li> <li>• Hygiene;</li> <li>• Psychology, pedagogy;</li> <li>• Local anesthesia and anesthesiology in dentistry;</li> <li>• Pediatric dentistry;</li> </ul>	<ul style="list-style-type: none"> <li>• Maxillofacial and gnathic surgery;</li> <li>• Implantology and reconstructive surgery of the oral cavity;</li> <li>• Dental assistant (general practice), incl. research work;</li> </ul>

\* - filled in accordance with the matrix of competencies of higher education programme.

\*\* - elective disciplines/practices

#### 4. THE DISCIPLINE WORKLOAD AND ACADEMIC ACTIVITIES

The total complexity of the discipline "Orthodontics and pediatric prosthetics" is 6 credit units.

Table 4.1. Types of academic activities during the period of the HE program mastering

Type of academic activities	TOTAL, academic hours (ac.h)	Semester(s)			
		8	9		
Classroom learning, ac.h.	115	51	64		
including:					
Lectures ( <b>Lec</b> )	-	-	-		
Lab work ( <b>Lab</b> )	115	51	64		
Practical/seminar classes	-	-	-		
Self-studies, academic hours	68	15	53		
Evaluation and assessment (exam or pass/fail grading)	33	6	27		
<b>Total workload of the discipline</b>	ac.h.	<b>216</b>	<b>72</b>	<b>144</b>	
	credits	<b>6</b>	<b>2</b>	<b>4</b>	

#### 5. THE COURSE MODULES AND CONTENTS

Table 5.1. The content of the discipline and types of academic activities

Name of the discipline section	Section content	Type of academic activities
Section 1. Introduction to the specialty. Organization of orthodontic care. Age features of normal dentoalveolar system in children. Etiology, classification of dentoalveolar anomalies.	Topic 1.1. Introduction to the specialty. Organization of orthodontic care.	Lab
	Topic 1.2. Age features of normal dentoalveolar system in children.	Lab
	Topic 1.3. Etiology of dental anomalies.	Lab
	Topic 1.4. Classification of dental anomalies.	Lab
Section 2. Methods of examination and diagnostics in orthodontics.	Topic 2.1. Clinical examination method in orthodontics.	Lab
	Topic 2.2. Anthropometric examination methods.	Lab
	Topic 2.3. X-ray methods of examination.	Lab
	Topic 2.4. Functional examination methods.	Lab
Section 3. Methods of treatment in orthodontics.	Topic 3.1. Methods of treatment in orthodontics. Classification of devices.	Lab
	Topic 3.2. Apparatuses of mechanical action.	Lab

Prevention of dental anomalies.	Topic 3.3. Devices of functional-guiding and combined action. Trainers, activators and regulators of functions.	Lab
Section 4. Modern technologies in orthodontics.	Topic 4.1. Modern orthodontic methods of treatment.	Lab
	Topic 4.2. Bracket system.	Lab
	Topic 4.3. Retention of the results of orthodontic treatment.	Lab
Section 5. Dental anomalies. clinical forms. Diagnostics. Treatment.	Topic 5.1. Diagnosis and methods of treatment of anomalies of teeth, dental arches and jawbones.	Lab
	Topic 5.2. Diagnosis and treatment of anomalies of occlusion in the sagittal plane.	Lab
	Topic 5.3. Diagnosis and treatment of anomalies of occlusion in the vertical plane. Diagnosis and treatment of anomalies of occlusion in the transversal plane.	Lab
Section 6. Dental prosthetics in children and adolescents.	Topic 6.1. Principles of treatment of dentoalveolar anomalies in congenital malformations of the maxillofacial region.	Lab
	Topic 6.2. Dental prosthetics in children and adolescents.	Lab

Table 5.4. Laboratory activities

**Orthodontics and pediatric prosthetics (8 sem., 2 credits)**

No. p / p	No. of discipline section	Topics of laboratory classes	Work load (hour.)
1	<b>Module 1.</b> Introduction to the specialty. Organization of orthodontic care. Age features of the dentoalveolar system of the child are normal. Etiology, classification of dentoalveolar anomalies.	Introduction to the specialty. Organization of orthodontic care.	6
		Age features of the dentoalveolar system of the child are normal.	6
		Etiology of dental anomalies	6
		Classification of dental anomalies.	6
2.	<b>Module 2.</b> Methods of examination and diagnostics in orthodontics.	Clinical examination method in orthodontics	5
		Anthropometric examination methods	5
		X-ray methods of research	5
		Functional examination methods	5
		<b>Attestations No. 1, No. 2:</b> tests, situational tasks, control of practical skills for the module being studied.	7
	Total	<b>Laboratory classes 8th semester</b>	51 hours

**Orthodontics and children's prosthetics (9 sem., 4 credits)**

No. p / p	No. of discipline section	Topics of laboratory classes 9 <sup>th</sup> semester	Labor capacity (hour.)

1.	<b>Module 3.</b> Methods of treatment in orthodontics. Prevention of dental anomalies	Methods of treatment in orthodontics. Appliance's classification	5
		Appliances of mechanical action.	5
		Appliances of functional-guiding and combined action. Trainers, activators and regulators of functions.	5
2.	<b>Module4.</b> Modern technologies in orthodontics	Modern orthodontic methods of treatment.	5
		Breket system	5
		Retention of the results of orthodontic treatment.	5
3.	<b>Module 5.</b> Dental anomalies. clinical forms. Diagnostics. Treatment.	Diagnosis and methods of treatment of anomalies of teeth, dentition and jawbones.	5
		Diagnosis and treatment of anomalies of occlusion in the sagittal direction.	5
		Diagnosis and treatment of anomalies of occlusion in the vertical direction. Diagnosis and treatment of anomalies of occlusion in the transverse direction.	5
4.	<b>Module 6.</b> Dental prosthetics in children and adolescents.	Principles of treatment of dentoalveolar anomalies in congenital malformations of the maxillofacial region.	5
		Dental prosthetics in children and adolescents.	5
		Preparing for the exam	5
		<b>Attestations No. 1, No. 2:</b> tests, situational tasks, control of practical skills for the module being studied.	4
	Total	<b>Laboratory classes 9th semester</b>	64 hours

## 6. CLASSROOM EQUIPMENT AND TECHNOLOGY SUPPORT REQUIREMENT

Table 7.1. Logistical and material provision of the discipline.

Classroom for Academic Activity Type	Classroom Equipment	Specialized educational/laboratory equipment, software and materials for the mastering of the discipline
Lecture	An auditorium for lecture-type classes, equipped with a set of specialized furniture; board (screen) and technical means of multimedia presentations. A variety of equipment is used for classroom activities: (visual aids, dental equipment and surgical instruments for extraction of teeth, phantoms, drugs, extracted teeth, x-	Training room for conducting lecture and seminar classes, group and individual consultations, current control and intermediate certification. A set of specialized furniture; technical means: multimedia projector, laptop, WiFi available Internet access.

<b>Classroom for Academic Activity Type</b>	<b>Classroom Equipment</b>	<b>Specialized educational/laboratory equipment, software and materials for the mastering of the discipline</b>
	rays, computer presentation, computers, projector, tables, dental equipment and surgical instruments for emergency care ), (classrooms 245, 249)	Software: Microsoft products (OS, office suite, including MS Office / Office 365, Teams)
Learning Lab	An auditorium for laboratory work, individual consultations, current control and intermediate certification, equipped with a set of specialized furniture and equipment.	Cabinets with appropriate equipment (Phantom Class), instruments, medical equipment, preventive measures;
Classroom for students' self-studies	Classroom for self-studies of students (can be used for seminars and consultations), equipped with a set of specialized furniture and computers with access to the internet.	

## **8. RECOMMENDED SOURCES for COURSE STUDIES**

### *Main literature:*

- Orthodontics. Modern Methods of Diagnosing Dental Abnormalities, Dentition and Occlusion : Tutorial / L. S. Persin, A. B. Slabkovskaia, E. A. Karton [et al.]. – Moscow : Общество с ограниченной ответственностью Издательская группа "ГЭОТАР-Медиа", 2021. – 160 p. – ISBN 978-5-9704-6337-6. – DOI 10.33029/9704-6337-6-OMM-1-160. – EDN UIBWJX.
- Proffit W. R. et al. Contemporary Orthodontics, 6e: South Asia Edition-E-Book. – Elsevier India, 2019.
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### *Additional literature:*

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- Pediatric dentistry at the present stage [text] / O.P. Maksimova // Clinical Dentistry. - 2012. - No. 3. - P.38-41.
- Guidelines for writing a term paper on the topic "History of the disease in the clinic of pediatric dentistry".: /T.F.Kosyreva, V.V.Safroshkina, E.S.Zaporozhskaya-Abramova. – M.: RUDN, 2012. -24p.
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### **Information support of discipline**

- a) Information technologies used in the educational process:
  - Problem lectures
  - Role and business games
  - Computer presentations during theoretical and practical classes
- b) Software
  - training computer programs prepared using the Microsoft Office application package
  - controlling computer programs prepared using the Microsoft Office application package
- c) Information reference systems
  - selection of lecture material on CDs, video films
- d) databases, information and reference and search systems
  - RUDN Electronic Library System - RUDN EBS <http://lib.rudn.ru/MegaPro/Web>
  - ELS "University Library Online" <http://www.biblioclub.ru>
  - EBS "Lan" <http://e.lanbook.com/>
  - scientific electronic library eLibrary
  - PubMed international citation database
  - publishing house of academic medical literature Elsevier
  - information and educational portal for doctors Univadis
  - electronic educational resource "Telecommunication educational and information system" of RUDN University
  - cathedral site

#### *Internet sources*

1. RUDN ELS and third-party ELS, to which university students have access on the basis of concluded agreements:

- RUDN Electronic Library System - RUDN EBS <http://lib.rudn.ru/>

2. *Databases and search engines:*

- electronic fund of legal and normative-technical documentation <http://docs.cntd.ru/>

- Yandex search engine <https://www.yandex.ru/>

- Google search engine <https://www.google.ru/>

- abstract database SCOPUS

- <http://www.elsescience.en/products/scopus/>

*Learning toolkits for self-studies during the development of the discipline\*:*

1. Lectures on the discipline "**Orthodontics and children's prosthetics**".
2. Methodological Guidelines for the implementation and execution of control and independent work on the discipline "**Orthodontics and children's prosthetics**"

\* - all educational and methodological materials for independent work of students are placed in accordance with the current procedure on the page of the discipline **in TUIS** (the university telecommunication educational and information system).

## **9. EVALUATION TOOLKIT AND GRADE SYSTEM FOR ASSESSMENT**

Evaluation Toolkit (ET) and a point-rating system (PRS)\* for assessment the level of competence formation (part of competencies) based on the results of mastering the discipline " **Orthodontics and pediatric prosthetics** " are presented in the Appendix to this Work Program of the discipline.

\* - ET and PRS are formed on the basis of the requirements of the relevant local regulatory act of the RUDN

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