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**RUDN University Institute of Medicine** 

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

# **COURSE SYLLABUS**

# Orthodontics and pediatric prosthetics

course title

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

# **31.05.03 Dentistry**

field of studies / speciality code and title

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

# **Dentistry**

higher education programme profile/specialisation title

# 1. 1. COURSE GOAL(s)

The goal of the course "Orthodontics and pediatric prosthetics" is to prepare of a dentists 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 FOR LEARNING OUTCOMES

Mastering the course (module) "Orthodontics and pediatric prosthodontics" is aimed at the development of the following competences /competences in part: GC-1; GPC-1, GPC-2, GPC-4, GPC-5, GPC-9; PC-1, PC-2, PC-5.

Table 2.1. List of competences that students acquire through the course study

Competence code	Competence descriptor	Competence formation indicators (within this course)
GC-1.	Being able to implement critical analysis of problem situations based on systems approach, develop an action strategy.	GC-1.1. Analysing the problem situation as a system identifying its components and links between them.
GPC-1.	Being able to implement moral standards and legal regulations, ethical and deontological principals in professional activity	chics and deontology; legal bases in healthcare; legal aspects of medical practice.  GPC-1.3. 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.
GPC-2.	Being able to monitor the effectiveness of preventive measures, healthy lifestyle formation and sanitary	GPC-2.1. Analysing the causes of professional errors, therapeutic failures and conflict situations.  GPC-2.2. Providing scientific arguments for and implementing

and hygienic education of the population of the population the medical and legal training of dentists, preventing professional errors.	112
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	orc
adverse outcomes and conflict	ors,
situations.	
GPC-2.3. Assessing the effectivene	
preventive measures aimed at preventive measures are also an aimed at a measure measures are also an aimed at a measure measures are also an aimed at a measure measure measures are also an aimed at a measure measurement and aimed at a measurement are also an aimed at a measurement and aimed at a measurement are also an aimed at a measurement at a measurement and aimed at a measurement are also an aimed at a measurement and aimed at a measurement are also an aimed at a measurement and aimed at a measurement are also an aimed at a measurement and aimed at a measurement are also an aimed at a measurement and aimed at a measurement are also an aimed at a measurement and aimed at a measurement are also an aimed at a measurement and aimed at a measurement are also an aimed at a measurement are a measurement and aimed at a measurement are a measurement are a measurement and a measurement are a measurement are a measurement and a measurement are a	_
professional errors, adverse outcom	es
and conflict situations in dentistry.	
<b>GPC-4.1.</b> Analysing the awareness	
the effectiveness of the population of a healthy lifestyle	and
preventive measures, <u>medical literacy</u> .	
healthy lifestyle GPC-4.3. Preparing an oral present	ation
formation and sanitary or a printed text that promotes a hea	lthy
and hygienic education lifestyle and increases the literacy of	f the
of the population population concerning dental disease	
prevention.	
GPC-5. Being able to examine GPC-5.1. Gathering anamnesis by	
patients to determine a analysing the patient's complaints,	
diagnosis when solving making a physical examination at a	
professional tasks dental appointment.	
GPC-5.2. Formulating a preliminar	v
diagnosis and drawing up a plan for	
laboratory and instrumental	
examinations of a dental patient.	
GPC-5.3. Compiling medical	
documentation for a dental patient i	n
accordance with regulatory	11
requirements.	
GPC-5.4. Referring a patient to a	
laboratory examination in case there	are
medical indications in accordance v	
the current procedures for the provi	
	81011
of medical care, clinical guidelines	on of
(treatment protocols) on the provisi	
medical care taking into account the	•
standards of dental care.	
GPC-5.5. Referring a patient to an	
instrumental examination in case th	
are medical indications in accordan	ce
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 specialist	s in
case there are medical indications in	ı
accordance with the current procedu	ıres
for the provision of medical care,	
clinical guidelines (treatment protoc	cols)

		on the provision of dental care taking
		into account the standards.
		GPC-5.8. 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.
GPC-6.	Being able to prescribe non-drug and drug treatment, monitor its	GPC-6.1. Developing a plan for dental disease treatment taking into account the diagnosis, age and clinical picture in
	efficacy and safety when solving professional	accordance with the current procedures for the provision of medical care,
	tasks	clinical guidelines (treatment protocols) on the provision of medical care taking
		into account the medical care standards.
		GPC-6.2. Selecting medical products
		(including dental materials) for drawing
		up a comprehensive plan for dental
		disease treatment. Following up the
		treatment of a patient.
		GPC-6.3. 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.
		GPC-6.9. Evaluating the efficacy and
		safety of using medicinal drugs, medical
		devices and other methods of treatment
		at a dental appointment.
GPC-9.	Being able to assess	GPC-9.1. Being able to use the
	morpho-functional,	algorithm of clinical, laboratory and
	physiological conditions	functional diagnosis in dealing with
	and pathological	professional tasks.
	processes in the human	<b>GPC-9.2.</b> Evaluating the results of
	body to solve	clinical, laboratory and functional
	professional tasks	diagnosis in dealing with professional
		tasks.
		<b>GPC-9.3.</b> Determining morpho-
		functional, physiological states and
		pathological processes of the human
		body.

PC-1.	Being able to make an examination of a patient in order to determine a diagnosis.	PC-1.1. Making an initial examination and/or reexamination of a patient in order to make a preliminary diagnosis.  PC-1.2. 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.  PC-1.3. 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.  PC-1.5. Making a preliminary/final diagnosis based on the patient examination; laboratory and instrumental examinations.  PC-1.6. Making a final diagnosis based on additional examinations of patients.
PC-2.	Being able to prescribe, monitor the efficacy and safety of non-drug and drug treatment	PC-2.1. 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.  PC-2.2. Selecting drugs and medical devices (including dental materials) for dental disease treatment assessing the possible side effects of taking medicinal drugs.  PC-2.3. 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.  PC-2.4. Selecting the type of local anesthesia/anesthesia and assessing the possible complications caused by using it.  PC-2.5. Conducting a specialized appointment for adults and/or children, monitoring the course of treatment of

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		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.  PC-2.8. 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).
PC-5.		PC-5.1. Motivating patients (their
		relatives/legal representatives) to stick to
	Being able to conduct	a healthy lifestyle and give up bad
	health and hygiene	habits.
	education among the	
	population and medical	
	workers in order to form	
	a healthy lifestyle	

# 3.COURSE IN HIGHER EDUCATION PROGRAMME STRUCTURE

The course refers to the core/variable/elective\* component of (B1) block of the higher educational programme curriculum.
\* - Underline whatever applicable.

Within the higher education programme students also master other (modules) and / or internships that contribute to the achievement of the expected learning outcomes as results of the course study.

Table 3.1. The list of the higher education programme components/disciplines that contribute to the achievement of the expected learning outcomes as the course study results

Competence code	Competence descriptor	Previous courses/modules*	Subsequent courses/modules*
GC-1	GC-1. Being able to implement critical analysis of problem situations based on systems approach, develop an action strategy.	<ul> <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> </ul>	<ul> <li>Pediatric maxillofacial surgery</li> <li>Maxillofacial prosthetics</li> <li>Gnathology and functional diagnosis of the temporomandibular joint;</li> </ul>

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GPC-1	GPC-1. Being able to implement moral standards and legal regulations, ethical and deontological principals in professional activity	<ul> <li>Psychology, pedagogy;</li> <li>Immunology, clinical immunology;</li> <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> <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</li> </ul>	
GPC-2	GPC-2. Being able to analyse the results of their own professional activity to prevent professional errors	<ul> <li>procedural nurses;</li> <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> </ul>	<ul> <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>
GPC-4	GPC-4. Being able to monitor the effectiveness of preventive	<ul> <li>Pediatric dentistry;</li> <li>Prevention and community dentistry;</li> <li>Hygiene;</li> <li>Pediatric dentistry;</li> </ul>	

	measures, healthy lifestyle formation and sanitary and hygienic education of the population		
GPC-5	GPC-5. Being able to examine patients to determine a diagnosis when solving professional tasks	<ul> <li>Emergency conditions in outpatient</li> <li>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 <ul> <li>Pathological anatomy</li> <li>Pathological anatomy</li> <li>Cariesology and diseases of hard dental tissues;</li> <li>Cariesology and diseases of hard dental tissues;</li> </ul> </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</li> <li>Complex prosthetics);</li> </ul>	<ul> <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>
GPC-6	GPC-6. Being able to prescribe non-drug and drug treatment, monitor its efficacy and safety when solving professional tasks	<ul> <li>Emergency conditions in outpatient</li> <li>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</li> </ul>	<ul> <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</li> </ul>

		immunology;  Obstetrics;  Cariesology and diseases of hard dental tissues;  Prosthetics for complete absence of teeth;  Pediatric dentistry;  Fundamentals of military training.  Life safety;  Dental prosthetics (simple prosthetics);  Dental prosthetics (complex prosthetics);	maxillofacial surgery;  • Gnathology and functional diagnosis of the temporomandibular joint;  • Maxillofacial prosthetics;
GPC-9	GPC-9. Being able to assess morphofunctional, physiological conditions and pathological processes in the human body to solve professional tasks	<ul> <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> <li>Maxillofacial and gnathic surgery;</li> <li>Forensic Medicine;</li> <li>Implantology and reconstructive surgery of the oral cavity;</li> </ul>

patient in order to determine a diagnosis.  • Oral surgery; • Otorhinolaryngology; • Pathophysiology of the head and neck; • Pathological anatomy - Pathanatomy of the head and neck; • Immunology, clinical immunology; • Chemistry of biogenic elements**; • Radiation diagnostics; • Obstetrics; • Obstetrics; • Carricsology and diseases of hard dental tissues; • Local anesthesia and anesthesiology in dentistry; • Prosthetics with complete absence of lips; • Pediatric dentistry; • Propaedeutics of dental diseases; • Dental modeling of teeth**; • Three-dimensional computer modeling of teeth**; • Three-dimensional x-ray diagnostic methods in dentistry*; • Fundamentals of military training. • Life safety; • Dental prosthetics (simple prosthetics); • Dental prosthetics (complex prosthetics); • Assistant dentist		operative surgery of
Pathophysiology of the head and neck; Pathological anatomy Pathanatomy of the head and neck; Immunology, clinical immunology; Chemistry of biogenic elements**; Radiation diagnostics; Obstetrics; Cariesology and discases of hard dental tissues; Local anesthesia and anesthesiology in dentistry; Prosthetics with complete absence of lips; Pediatric dentistry; Propaedcutics of dental diseases; Dental modeling of teeth**; Three-dimensional computer modeling of teeth**; Three-dimensional computer modeling of teeth*; Three-dimensional computer	to make an examination of a patient in order to determine a	the head and neck;  Ophthalmology; Endodontics; Periodontology; Oral surgery; Otorhinolaryngology;  Maxillofacial and Gnathic Surgery; Gerontostomatology and diseases of the oral mucosa;
(simple prosthetics); • Dental prosthetics (complex prosthetics); • Assistant dentist	determine a	<ul> <li>Oral surgery;</li> <li>Otorhinolaryngology;</li> <li>Pathophysiology - Pathophysiology of the head and neck;</li> <li>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> </ul>
• Assistant dentist		<ul> <li>(simple prosthetics);</li> <li>Dental prosthetics (complex prosthetics);</li> <li>Assistant dentist (hygienist);</li> </ul>

C-2. Being able prescribe, onitor the ficacy and fety of non-drug ad drug eatment	<ul> <li>(surgeon);</li> <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> </ul>	<ul> <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</li> </ul>
	<ul> <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</li> </ul>	temporomandibular joint;  • Maxillofacial prosthetics;  • Aesthetic restoration of teeth**;  • Assistant dentist (general practice), incl. research work;
C-5. Being able conduct health ad hygiene lucation among e population and edical workers order to form a ealthy lifestyle	<ul> <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> </ul>	<ul> <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>
lu e e e e a	conduct health I hygiene acation among population and dical workers order to form a lthy lifestyle	dental diseases; Organization of general patient care; Infectious diseases, phthisiology; Dental prosthetics (simple prosthetics); Dental prosthetics (complex prosthetics); Assistant dentist (surgeon);  -5. Being able conduct health hygiene reation among population and dical workers order to form a lthy lifestyle  dental diseases; Organization of general patient care;  Infectious diseases, phthisiology;  Oral prosthetics); Pontal prosthetics (complex prosthetics);  Oral surgery; Prevention and community dentistry; Public Health and Healthcare; Hygiene; Psychology, pedagogy; Local anesthesia and anesthesiology in

<sup>\*</sup> To be filled in according to the competence matrix of the higher education programme.

# 4. COURSE WORKLOAD AND ACADEMIC ACTIVITIES

The total workload of the course "**Orthodontics and pediatric prosthetics**" is 5 credits (180 academic hours).

Table 4.1. Types of academic activities during the periods of higher education programme mastering (full-time training)\*

Type of academic activities		Total academic	Semesters/training modules			,
		hours	8	9		
Classroom learning, ac.h.	119	51	68			
including:						
Lectures (LC)		-	-	-		
Lab work (LW)		119	51	68		
Seminars (workshops/tutorials) (S)		-	-	-		
Self-studies		37	15	22		
Evaluation and assessment (exam/passing/failing grade)		24	6	18		
Course workload ac.h.		180	72	108		
credits		5	2	3		

<sup>\*</sup> To be filled in regarding the higher education programme correspondence training mode.

# **5. COURSE CONTENTS**

Table 5.1. Course contents and academic activities types

Course module title	Course module contents (topics)	Academic activities types
Section 1. Introduction to the specialty.	Topic 1.1. Introduction to the specialty. Organization of orthodontic care.	LW
Organization of orthodontic care. Age	Topic 1.2. Age features of normal dentoalveolar system in children.	LW
features of normal	Topic 1.3. Etiology of dental anomalies.	LW
dentoalveolar system in children. Etiology, classification of dentoalveolar anomalies.	Topic 1.4. Classification of dental anomalies.	LW
Section 2. Methods of	Topic 2.1. Clinical examination method in orthodontics.	LW
examination and	Topic 2.2. Anthropometric examination methods.	LW
diagnostics in	Topic 2.3. X-ray methods of examination.	LW
orthodontics.	Topic 2.4. Functional examination methods.	LW
Section 3. Methods of treatment in	Topic 3.1. Methods of treatment in orthodontics. Classification of devices.	LW
orthodontics.	Topic 3.2. Apparatuses of mechanical action.	LW
Prevention of dental anomalies.	Topic 3.3. Devices of functional-guiding and combined action. Trainers, activators and regulators of functions.	LW
Section 4. Modern	Topic 4.1. Modern orthodontic methods of treatment.	LW
technologies in	Topic 4.2. Bracket system.	LW
orthodontics.	Topic 4.3. Retention of the results of orthodontic treatment.	LW
Section 5. Dental anomalies. clinical	Topic 5.1. Diagnosis and methods of treatment of anomalies of teeth, dental arches and jawbones.	LW
forms. Diagnostics.	Topic 5.2. Diagnosis and treatment of anomalies of	LW

Treatment.	occlusion in the sagittal plane.	
	Topic 5.3. Diagnosis and treatment of anomalies of	LW
	occlusion in the vertical plane. Diagnosis and treatment of	
	anomalies of occlusion in the transversal plane.	
Section 6. Dental	Topic 6.1. Principles of treatment of dentoalveolar	LW
prosthetics in children	anomalies in congenital malformations of the	
and adolescents.	maxillofacial region.	
	Topic 6.2. Dental prosthetics in children and adolescents.	LW

<sup>\* -</sup> to be filled in only for <u>full</u>-time training: LC - lectures; LW - lab work; S - seminars.

# 6. CLASSROOM EQUIPMENT AND TECHNOLOGY SUPPORT REQUIREMENTS

Table 6.1. Classroom equipment and technology support requirements

Type of academic activities	Classroom equipment	Specialised educational / laboratory equipment, software, and materials for course study (if necessary)
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-rays, computer presentation, computers, projector, tables, dental equipment and surgical instruments for emergency care ), (classrooms 245, 249)	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, Interactive complex Lumien 86" LMP8604MLRU, WiFi available Internet access. Software: Microsoft products (OS, office suite, including MS Office / Office 365)
Lab-work	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;
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.	

# 7. RESOURCES RECOMMENDED FOR COURSE STUDY

# Main readings:

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.
- Lobprise H. B. Occlusion and orthodontics //Wiggs's Veterinary Dentistry: Principles and Practice. 2019. C. 411-437.
- Dawson P. E. Functional occlusion: from TMJ to smile design. Elsevier Health Sciences, 2006.

# Additional readings:

- Wang N. et al. Recent advances in antibacterial coatings for orthodontic appliances //Frontiers in Bioengineering and Biotechnology. 2023. T. 11. C. 1093926.
- Kapos F. P. et al. Temporomandibular disorders: a review of current concepts in aetiology, diagnosis and management //Oral surgery. 2020. T. 13. №. 4. C. 321-334.
- Lee G. H. et al. Protocols for orthodontic treatment of patients with temporomandibular joint disorders //American Journal of Orthodontics and Dentofacial Orthopedics. 2021.
   T. 159. № 3. C. 373-388.
- Minervini G. et al. Prevalence of temporomandibular disorders in children and adolescents evaluated with Diagnostic Criteria for Temporomandibular Disorders: A systematic review with meta-analysis //Journal of oral rehabilitation. − 2023. − T. 50. − № 6. − C. 522-530.
- Dowgierd K. et al. Protocol for multi-stage treatment of temporomandibular joint ankylosis in children and adolescents //Journal of Clinical Medicine. − 2022. − T. 11. − №. 2. − C. 428.
- Vyas T. et al. Cleft of lip and palate: A review //Journal of family medicine and primary care. 2020. T. 9. № 6. C. 2621-2625.
- 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.
- Perez C. Temporomandibular disorders in children and adolescents. Gen Dent. 2018 Nov-Dec;66(6):51-55. PMID: 30444707

## **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 <a href="http://docs.entd.ru/">http://docs.entd.ru/</a>
  - Yandex search engine <a href="https://www.yandex.ru/">https://www.yandex.ru/</a>
  - Google search engine <a href="https://www.google.ru/">https://www.google.ru/</a>
  - 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 pediatric prosthetics".
- 2. Methodological Guidelines for the implementation and execution of control and independent work on the discipline "Orthodontics and pediatric 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).

# 8. ASSESSMENT TOOLKIT AND GRADING SYSTEM\* FOR EVALUATIONOF STUDENTS' COMPETENCES LEVEL UPON COURSE COMPLETION

Evaluation materials and point-rating system\* for assessing the level of competence formation (GC-1; GPC-1, GPC-2, GPC-4, GPC-5, GPC-9; PC-1, PC-2, PC-5) based on the results of mastering the discipline «Faculty surgery» are presented in the Appendix to this Work Program of the discipline.

\* The assessment toolkit and the grading system are formed on the basis of the requirements of the relevant local normative act of RUDN University (regulations / order).

# Associate professor, Department of Pediatric Dentistry and Orthodontics Position, educational department HEAD OF EDUCATIONAL DEPARTMENT: Department of Pediatric Dentistry and Orthodontics educational department Signature N.S. Tuturov N.S. Tuturov name and surname.

# **HEAD OF HIGHER EDUCATION PROGRAMME:**

Deputy Director for Academic		
Affairs, Medical Institute, Head	C.N. Dagumaya	
department, professor of the		S.N. Razumova
Department of propaedeutics of		
dental diseases		
Position, educational department	Signature	name and surname.