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

Institute of Medicine

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

COURSE SYLLABUS

Modern Endodontics

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

2024-2025

1. COURSE GOAL(s)

The goal of the course “Modern Endodontics” is to equip students with the knowledge of clinic, diagnosis and treatment of complicated caries; to form the clinical thinking of the future specialist; establish causal relationships between the manifestations of the disease and the patient's complaints; substantiate the diagnosis, draw up an adequate plan for examination and treatment, using modern materials and new technologies.

2. REQUIREMENTS FOR LEARNING OUTCOMES

Mastering the course (module) «Modern Endodontics» is aimed at the development of the following competences /competences in part:

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

Competence code	Competence descriptor	Competence formation indicators (within this course)
GPC – 2	Being able to analyse the results of their own professional activity to prevent professional errors	GPC-2.1. Analysing the causes of professional errors, therapeutic failures and conflict situations; GPC-2.2. 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.
GPC-5	Being able to examine patients to determine a diagnosis when solving professional tasks	GPC-5.1. Gathering anamnesis by analysing the patient’s complaints, making a physical examination at a dental appointment. GPC-5.2. Formulating a preliminary 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 in accordance with regulatory requirements GPC-5.4. 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. GPC-5.5. Referring a patient to an instrumental examination in case there are medical indications in accordance with the

		<p>current procedures for the provision of medical care, clinical guidelines (treatment protocols) on the provision of dental care taking into account the standards.</p> <p>GPC-5.9. Making a diagnosis based on the current international statistical classification of diseases and health problems.</p>
GPC –6	Being able to prescribe non-drug and drug treatment, monitor its efficacy and safety when solving professional tasks	<p>GPC-6.1. 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.</p> <p>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.</p>
PC-1	Being able to make an examination of a patient in order to determine a diagnosis.	<p>PC-1.1. Making an initial examination and/or reexamination of a patient in order to make a preliminary diagnosis.</p> <p>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.</p> <p>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.</p>

PC –2	Being able to prescribe, monitor the efficacy and safety of non-drug and drug treatment	<p>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.</p> <p>PC-2.2. Selecting drugs and medical devices (including dental materials) for dental disease treatment assessing the possible side effects of taking medicinal drugs</p> <p>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.</p> <p>PC-2.4. Selecting the type of local anesthesia/anesthesia and assessing the possible complications caused by using it.</p>
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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*
GPC-2.1	Being able to analyse the results of their own professional activity to prevent professional errors therapeutic failures and conflict situations;	Bioethics Local anesthesia and anesthesiology in dentistry	Endodontics Gerontostomatology and diseases of the oral mucosa Periodontics Oral surgery Oral and Maxillofacial Surgery Head and Neck Diseases Pediatric Dentistry Orthodontics and Pediatric Prosthodontics Implantology and reconstructive surgery of the oral cavity

			<p>Modern Endodontics Aesthetic Restoration Observing and Assisting a Dentist (Operative Dentistry and Endodontics) Observing and Assisting a Dentist (Prosthodontics) Observing and Assisting a Dentist (Pediatric) Preparation for and Passing the State Exam State Exam (Computer Testing) State Exam (Interdisciplinary Interview)</p>
GPC-2.2	<p>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.</p>	<p>Bioethics Local anesthesia and anesthesiology in dentistry</p>	<p>Endodontics Head and Neck Diseases Gerontostomatology and diseases of the oral mucosa Periodontics Oral surgery Maxillofacial and Orthognathic Surgery Orthodontics and Pediatric Prosthodontics Pediatric Dentistry Implantology and reconstructive surgery of the oral cavity Modern Endodontics Observing and Assisting a Dentist (Prosthodontics) Observing and Assisting a Dentist (Pediatric) Preparation for and Passing the State Exam State Exam (Computer Testing) State Exam (Interdisciplinary Interview)</p>
GPC-5.1.	<p>Gathering anamnesis by analysing the patient's complaints, making a physical examination at a dental appointment.</p>	<p>Local anesthesia and anesthesiology in dentistry</p>	<p>Internal Medicine General Surgery Surgical Diseases Dermatovenerology Neurology Psychiatry and Narcology Endodontics Gerontostomatology and diseases of the oral mucosa Periodontics Oral surgery Gnathology and Temporo-Mandibular Joint's Functional Diagnostics Prosthodontics (Simple Prosthetics) Prosthodontics of Edentulous Patient Prosthodontics (Complex Prosthetics) Maxillofacial and Orthognathic Surgery Head and Neck Maxillofacial Prosthodontics Pediatric Dentistry Orthodontics and Pediatric Prosthodontics Medical Genetics in Dentistry Modern Endodontics Observing and Assisting a Dentist (Operative Dentistry and Endodontics) Observing and Assisting a Dentist (Prosthodontics)</p>

			<p>Observing and Assisting a Dentist (Pediatric) Preparation for and Passing the State Exam State Exam (Computer Testing) State Exam (Interdisciplinary Interview)</p>
GPC-5.2	Formulating a preliminary diagnosis and drawing up a plan for laboratory and instrumental examinations of a dental patient	Propaedeutics of Dental Diseases Local anesthesia and anesthesiology in dentistry	<p>Internal Medicine General Surgery Surgical Diseases Dermatovenerology Neurology Psychiatry and Narcology Endodontics Gerontostomatology and diseases of the oral mucosa Periodontics Oral surgery Gnathology and Temporo-Mandibular Joint's Functional Diagnostics Prosthodontics (Simple Prosthetics) Prosthodontics of Edentulous Patient Prosthodontics (Complex Prosthetics) Maxillofacial and Orthognathic Surgery Head and Neck Diseases Pediatric Maxillofacial Dentistry Maxillofacial Prosthodontics Pediatric Dentistry Orthodontics and Pediatric Prosthodontics Medical Genetics in Dentistry Modern Endodontics Observing and Assisting a Dentist (Operative Dentistry and Endodontics) Observing and Assisting a Dentist (Prosthodontics) Observing and Assisting a Dentist (Pediatric) Preparation for and Passing the State Exam State Exam (Computer Testing) State Exam (Interdisciplinary Interview)</p>
GPC-5.3	Compiling medical documentation for a dental patient in accordance with regulatory requirements	Propaedeutics of Dental Diseases	<p>Internal Medicine General Surgery Surgical Diseases Dermatovenerology Neurology Psychiatry and Narcology Endodontics Gerontostomatology and diseases of the oral mucosa Periodontics Oral surgery Gnathology and Temporo-Mandibular Joint's Functional Diagnostics Prosthodontics (Simple Prosthetics) Prosthodontics of Edentulous Patient Prosthodontics (Complex Prosthetics) Maxillofacial and Orthognathic Surgery</p>

			<p>Head and Neck Diseases Pediatric Maxillofacial Dentistry Maxillofacial Prosthodontics Pediatric Dentistry Orthodontics and Pediatric Prosthodontics Medical Genetics in Dentistry Modern Endodontics Observing and Assisting a Dentist (Operative Dentistry and Endodontics) Observing and Assisting a Dentist (Prosthodontics) Observing and Assisting a Dentist (Pediatric) Preparation for and Passing the State Exam State Exam (Computer Testing) State Exam (Interdisciplinary Interview)</p>
GPC-5.4.	<p>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.</p>		<p>Internal Medicine Dermatovenereology Endodontics Gerontostomatology and diseases of the oral mucosa Periodontics Pediatric Dentistry Orthodontics and Pediatric Prosthodontics Modern Endodontics Observing and Assisting a Dentist (Pediatric) Preparation for and Passing the State Exam State Exam (Computer Testing)</p>
GPC-5.5.	<p>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.</p>	<p>Propaedeutics of Dental Diseases</p>	<p>Internal Medicine Dermatovenereology Neurology Endodontics Gerontostomatology and diseases of the oral mucosa Periodontics Pediatric Dentistry Orthodontics and Pediatric Prosthodontics Three-dimensional x-ray Diagnostic Methods in Dentistry Observing and Assisting a Dentist (Pediatric) Preparation for and Passing the State Exam State Exam (Computer Testing) State Exam (Interdisciplinary Interview)</p>
GPC-5.9.	<p>Making a diagnosis based on the current</p>	<p>Pathologic Anatomy -</p>	<p>Internal Medicine Dermatovenereology</p>

	international statistical classification of diseases and health problems.	Pathologic Anatomy of Head and Neck	Obstetrics Endodontics Gerontostomatology and diseases of the oral mucosa Periodontics Gnathology and Temporo-Mandibular Joint's Functional Diagnostics Prosthodontics (Simple Prosthetics) Prosthodontics of Edentulous Patient Prosthodontics (Complex Prosthetics) Pediatric Maxillofacial Dentistry Maxillofacial Prosthodontics Pediatric Dentistry Orthodontics and Pediatric Prosthodontics Medical Genetics in Dentistry Modern Endodontics Observing and Assisting a Dentist (Operative Dentistry and Endodontics) Observing and Assisting a Dentist (Prosthodontics) Observing and Assisting a Dentist (Pediatric) Preparation for and Passing the State Exam State Exam (Computer Testing) State Exam (Interdisciplinary Interview)
GPC-6.1.	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.	Immunology, Clinical Immunology Pharmacology	Internal Medicine Clinical Pharmacology General Surgery Surgical Diseases Health and Safety Dermatovenerology Neurology Psychiatry and Narcology Pediatrics Endodontics Gerontostomatology and diseases of the oral mucosa Periodontics Oral surgery Gnathology and Temporo-Mandibular Joint's Functional Diagnostics Prosthodontics (Simple Prosthetics) Prosthodontics of Edentulous Patient Prosthodontics (Complex Prosthetics) Maxillofacial and Orthognathic Surgery Head and Neck Diseases Pediatric Maxillofacial Dentistry Maxillofacial Prosthodontics Pediatric Dentistry Orthodontics and Pediatric Prosthodontics Medical Genetics in Dentistry Medical Rehabilitation Clinical Dentistry

			Implantology and Reconstructive Surgery Modern Endodontics Observing and Assisting a Dentist (Pediatric) Observing and Assisting a Dentist (General Dentistry), Including Research Practice Preparation for and Passing the State Exam State Exam (Computer Testing) State Exam (Interdisciplinary Interview)
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	Dental Materials General Surgery	Internal Medicine Surgical Diseases Health and Safety Dermatovenereology Psychiatry and Narcology Endodontics Gerontostomatology and diseases of the oral mucosa Periodontics Oral surgery Gnathology and Temporo-Mandibular Joint's Functional Diagnostics Prosthodontics (Simple Prosthetics) Prosthodontics of Edentulous Patient Prosthodontics (Complex Prosthetics) Maxillofacial and Orthognathic Surgery Head and Neck Diseases Pediatric Maxillofacial Dentistry Maxillofacial Prosthodontics Pediatric Dentistry Orthodontics and Pediatric Prosthodontics Medical Genetics in Dentistry Medical Rehabilitation Implantology and Reconstructive Surgery Modern Endodontics Observing and Assisting a Dentist (Pediatric) Observing and Assisting a Dentist (General Dentistry), Including Research Practice Preparation for and Passing the State Exam State Exam (Computer Testing) State Exam (Interdisciplinary Interview)
PC-1.1.	Making an initial examination and/or reexamination of a patient in order to make a preliminary diagnosis.	Immunology, Clinical Immunology Local anesthesia and anesthesiology in dentistry Propaedeutics of Dental Diseases	Health and Safety Otorhinolaryngology Obstetrics Endodontics Gerontostomatology and diseases of the oral mucosa Periodontics Oral surgery Gnathology and Temporo-Mandibular Joint's Functional Diagnostics Prosthodontics (Simple Prosthetics) Prosthodontics of Edentulous Patient Prosthodontics (Complex Prosthetics)

			<p>Maxillofacial Prosthodontics Head and Neck Diseases Pediatric Maxillofacial Dentistry Maxillofacial and Orthognathic Surgery Pediatric Dentistry Orthodontics and Pediatric Prosthodontics Medical Genetics in Dentistry Medical Rehabilitation Implantology and Reconstructive Surgery Modern Endodontics Aesthetic Restoration Observing and Assisting a Dentist (Oral Surgery) Observing and Assisting a Dentist (Operative Dentistry and Endodontics) Observing and Assisting a Dentist (Prosthodontics) Observing and Assisting a Dentist (Pediatric) Observing and Assisting a Dentist (General Dentistry), Including Research Practice Preparation for and Passing the State Exam State Exam (Computer Testing) State Exam (Interdisciplinary Interview)</p>
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.	Immunology, Clinical Immunology Local anesthesia and anesthesiology in dentistry	<p>Health and Safety Otorhinolaryngology Ophthalmology Obstetrics Endodontics Gerontostomatology and diseases of the oral mucosa Periodontics Oral surgery Gnathology and Temporo-Mandibular Joint's Functional Diagnostics Prosthodontics (Simple Prosthetics) Prosthodontics of Edentulous Patient Prosthodontics (Complex Prosthetics) Maxillofacial Prosthodontics Head and Neck Diseases Pediatric Maxillofacial Dentistry Maxillofacial and Orthognathic Surgery Pediatric Dentistry Orthodontics and Pediatric Prosthodontics Medical Genetics in Dentistry Medical Rehabilitation Implantology and Reconstructive Surgery Modern Endodontics Observing and Assisting a Dentist (Oral Surgery) Observing and Assisting a Dentist (Operative Dentistry and Endodontics) Observing and Assisting a Dentist (Prosthodontics) Observing and Assisting a Dentist (Pediatric)</p>

			Observing and Assisting a Dentist (General Dentistry), Including Research Practice Preparation for and Passing the State Exam State Exam (Computer Testing) State Exam (Interdisciplinary Interview)
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.	Immunology, Clinical Immunology	Health and Safety Endodontics Gerontostomatology and diseases of the oral mucosa Periodontics Gnathology and Temporo-Mandibular Joint's Functional Diagnostics Prosthodontics (Simple Prosthetics) Prosthodontics of Edentulous Patient Prosthodontics (Complex Prosthetics) Pediatric Maxillofacial Dentistry Maxillofacial Prosthodontics Pediatric Dentistry Orthodontics and Pediatric Prosthodontics Medical Genetics in Dentistry Medical Rehabilitation Three-dimensional Computer Modeling of Teeth Modern Endodontics Aesthetic Restoration Observing and Assisting a Dentist (Operative Dentistry and Endodontics) Observing and Assisting a Dentist (Prosthodontics) Observing and Assisting a Dentist (Pediatric) Observing and Assisting a Dentist (General Dentistry), Including Research Practice Cone Beam Computed Tomography in the Diagnosis Planning and Evaluation of the Effectiveness of Dental Solutions Preparation for and Passing the State Exam State Exam (Computer Testing) State Exam (Interdisciplinary Interview)
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.	Local anesthesia and anesthesiology in dentistry	Endodontics Gerontostomatology and diseases of the oral mucosa Periodontics Oral surgery Maxillofacial and Orthognathic Surgery Head and Neck Diseases Pediatric Dentistry Orthodontics and Pediatric Prosthodontics Implantology and Reconstructive Surgery Modern Endodontics Observing and Assisting a Dentist (Oral Surgery) Observing and Assisting a Dentist (Pediatric)

			Observing and Assisting a Dentist (General Dentistry), Including Research Practice Preparation for and Passing the State Exam State Exam (Computer Testing) State Exam (Interdisciplinary Interview)
PC-2.2.	Selecting drugs and medical devices (including dental materials) for dental disease treatment assessing the possible side effects of taking medicinal drugs	Innovative techniques in dentistry Local anesthesia and anesthesiology in dentistry	Clinical Pharmacology Endodontics Gerontostomatology and diseases of the oral mucosa Periodontics Oral surgery Maxillofacial and Orthognathic Surgery Head and Neck Diseases Pediatric Dentistry Orthodontics and Pediatric Prosthodontics Physiotherapy of Dental Diseases Implantology and Reconstructive Surgery Modern Endodontics Aesthetic Restoration Observing and Assisting a Dentist (Oral Surgery) Observing and Assisting a Dentist (Pediatric) Observing and Assisting a Dentist (General Dentistry), Including Research Practice Preparation for and Passing the State Exam State Exam (Computer Testing) State Exam (Interdisciplinary Interview)
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.	Medical Elementology Bioelements in Medicine	Endodontics Gerontostomatology and diseases of the oral mucosa Periodontics Pediatric Dentistry Orthodontics and Pediatric Prosthodontics Clinical Dentistry Modern Endodontics Observing and Assisting a Dentist (Pediatric) Observing and Assisting a Dentist (General Dentistry), Including Research Practice Preparation for and Passing the State Exam State Exam (Computer Testing) State Exam (Interdisciplinary Interview)
PC-2.4.	Selecting the type of local anesthesia/anesthesia and assessing the possible complications caused by using it.	Propaedeutics of Dental Diseases	Clinical Pharmacology Endodontics Gerontostomatology and diseases of the oral mucosa Periodontics Pediatric Dentistry Orthodontics and Pediatric Prosthodontics Modern Endodontics Observing and Assisting a Dentist (Pediatric)

			Observing and Assisting a Dentist (General Dentistry), Including Research Practice Preparation for and Passing the State Exam State Exam (Computer Testing) State Exam (Interdisciplinary Interview)
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* 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 "Modern Endodontics" is 2 credits (72 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 hours	Semesters/training modules			
		10			
Contact academic hours	34	34			
including:					
Lectures (LC)					
Lab work (LW)	34	34			
Seminars (workshops/tutorials) (S)					
Self-studies	35	35			
Evaluation and assessment (exam/passing/failing grade)	3	3			
Course workload	academic hours_	72	72		
	credits	2	2		

* 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 Basic aspects of modern endodontics.	Topic 1.1. Endodontics or implantation: criteria for choosing a treatment method. Topic 1.2. Key stages of endodontic treatment and modern standards for each of them. Topic 1.3. Methods of endodontic treatment: indications and contraindications.	LW
Section 2 Diagnostics in endodontics.	Topic 2.1 Basic diagnostic methods. Additional diagnostic methods. Topic 2.2 Differential diagnosis of endodontic pathology. The most common diagnostic errors	LW
Section 3 Preparing the patient for endodontic treatment.	Topic 3.1 Isolation of the working field. Topic 3.2 Creating an access cavity depending on the group membership and anatomical features of the teeth. Primary navigation, creation of a "carpet path" and the formation of a root canal.	LW
Section 4 Disinfection of the root canal system.	Topic 4.1 Microbiology of the root canal system. Topic 4.2 Irrigation solutions.	LW

	Techniques for activating irrigation solutions. Preparations for disinfection of root canals between visits.	
Section 5 Obturation of root canals.	Topic 5. Sealers and pastes. Lateral condensation of cold gutta-percha. Monopin method. Modified lateral condensation, application of gutta-percha on a carrier, vertical compaction of heated gutta-percha	LW
Section 6 Systemic pharmacotherapy in endodontics.	Topic 6.1 Non-steroidal anti-inflammatory drugs, antibiotics, immunomodulating agents, complex antihomotoxic drugs.	LW
Section 7 Correction of errors and complications in endodontic practice.	Topic 7.1 Formation of the access cavity using burs and ultrasonic tips: indications for use, quality standards and feasibility. Elimination of steps in the root canal, tactics of work with complex anatomy of the root canal system. Topic 7.2 The use of MTA in the closure of perforations at various levels, apexification and apexogenesis, direct and indirect pulp capping, pulpotomy. Topic 7.3 Re-treatment of root canals filled with plastic and hardening materials. Tactics of work in the presence of a foreign body in the root canal.	LW

* - to be filled in only for **full**-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	A lecture hall for lecture-type classes, equipped with a set of specialised furniture; board (screen) and technical means of multimedia presentations.	
Lab-work	An auditorium for laboratory work, individual consultations, current control and intermediate certification, equipped with a set of specialized furniture and equipment.	Available - 4 phantom classes with 78 head modules with built-in jaws with artificial teeth for practicing methods of treating dental diseases. Also for practicing manual skills in preparation on the latest dental simulator with the 3D function VirT EaSy Dental (manufactured in France) - 4 modules with programs for the treatment and implantation of teeth..
Seminar	An auditorium for conducting seminar-type classes, group and individual consultations, current control and intermediate certification, equipped with a set of specialized furniture and technical means for multimedia presentations.	Technical means: TOSHIBA X 200 multimedia projector, ASUS F9E Core2 DUO T 5750 laptop, Internet access. Software: Microsoft products (OC, office suite, including MS Office/Office

Type of academic activities	Classroom equipment	Specialised educational / laboratory equipment, software, and materials for course study (if necessary)
		365, Teams, Skype) a list of specialized equipment, stands, visual posters, etc. List of specialized equipment, stands, visual posters, etc.
Self-studies	Auditorium for independent work of students (can be used for seminars and consultations), equipped with a set of specialized furniture and computers with access to the EIOS.	An auditorium for independent work of students (can be used for seminars and consultations), equipped with a set of specialized furniture and computers with access to the EIOS.

* The premises for students' self-studies are subject to **MANDATORY** mention

7. RESOURCES RECOMMENDED FOR COURSE STUDY

Main readings:

1. Essentials of operative dentistry. Учебное пособие. М.: ГЕОТАР-МЕДИА. 2019, 512 p. Гриф УМО: регистрационный номер рецензии 571 ЭКУ от 20 декабря 2018 года. Daurova F.Yu., Makeeva M.K., Khabadze Z.S., Vayts S.V., Zoryan A.V., Bagdasarova I.V.
2. Cariology and Non-carries Lesions Daurova F. Yu., Khabadze Z.S, Makeeva V.K. Kogevnikova L.A Учебное пособие/Москва 2107
3. Tutorial guide of operative dentistry for dental students of second and third year of education, Daurova F. Yu., Khabadze Z.S., Makeeva V.K. Москва, 2016
4. Tests and tasks for students of 2nd year for discipline "Cariology". Current control. М.: РУДН. 2020, 132 с. Daurova F. Yu., Makeeva M/K/Vayts S. V., Khabadze Z.S.
5. Основы кариесологии в тестах и заданиях: тестовый контроль и оценка уровня знаний. (Fundamentals of cariesology in tests and tasks: Competency and knowledge assessment). Учебно-методические рекомендации на английском языке. М.: Изд-во РУДН. 2018, 88 с. Хабадзе З.С., Багдасарова И.В., Зорян А.В., Карнаева А.С., Кожевникова Л.А.

Internet sources

1. EBS of RUDN University and third-party EBS to which university students have access on the basis of concluded agreements:
 - a. Electronic library system RUDN - EBS RUDN <http://lib.rudn.ru/MegaPro/Web>
 - b. EBS "University Library Online" <http://www.biblioclub.ru>
 - c. EBS Yurayt <http://www.biblio-online.ru>
 - d. EBS "Student Consultant" www.studentlibrary.ru
 - e. EBS "Doe" <http://e.lanbook.com/>
2. Databases and search engines:
 - a. PUBMED
 - b. SCOPUS abstract database <http://www.elsevierscience.ru/products/scopus/>
 - c. WHO Documentation Center <http://whodc.mednet.ru/>

Training toolkit for self- studies to master the course *:

1. The set of lectures on the course “Modern Endodontics”.
2. The laboratory workshop (if any) on the course “Modern Endodontics”.
3. The guidelines for writing a course paper / project (if any) on the course “Modern Endodontics”.
4.

* The training toolkit for self- studies to master the course is placed on the course page in the university telecommunication training and information system under the set procedure.

8. ASSESSMENT TOOLKIT AND GRADING SYSTEM* FOR EVALUATION OF STUDENTS’ COMPETENCES LEVEL UPON COURSE COMPLETION

The assessment toolkit and the grading system* to evaluate the competences formation level (**General Professional Competences (GPC)- 2.1, 2.2, 5.1, 5.2, 5.3, 5.4, 5.5, 5.9, 6.1, 6.2; Professional Competences (PC) – 1.1, 1.2, 1.3, 2.1, 2.2, 2.3, 2.4**) upon the course study completion are specified in the Appendix to the course syllabus.

* 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).

DEVELOPERS:

Head of Conservative Dentistry Department, Associate Professor		Z.S. Khabadze
_____	_____	_____
position, department	signature	name and surname
Head of Educational Process of Conservative Dentistry Department, Associate Professor		I.V. Bagdasarova
_____	_____	_____
position, department	signature	name and surname
Associate Professor of Conservative Dentistry Department		M.K. Makeeva
_____	_____	_____
position, department	signature	name and surname

HEAD OF EDUCATIONAL DEPARTMENT:

of Conservative Dentistry		Z.S. Khabadze
_____	_____	_____
name of department	signature	name and surname

HEAD OF HIGHER EDUCATION PROGRAMME:

First Deputy Director of Institute of Medicine for Academic Affairs in the field of Dentistry		S.N. Razumova
_____	_____	_____

position, department

signature

name and surname