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 programme developer

COURSE SYLLABUS

Propaedeutics of Dental Diseases

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 "Propaedeutics of dental diseases" is to provide students with basic knowledge and practical skills underlying therapeutic, orthopedic and surgical dentistry.

2. REQUIREMENTS FOR LEARNING OUTCOMES

The development of the discipline "Propaedeutics of dental diseases" is aimed at the formation of the following competencies (parts of competencies): GPC – 5 (GPC -5.1, GPC -5.3); PC–1 (PC -1.1.), PC –2 (PC -2.4.), PC –7 (PC -7.1.).

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

Competence code	Competence descriptor	Competence formation indicators (within this course)
GPC - 5.	The ability to conduct a patient examination in order to establish a diagnosis when solving professional tasks.	GPC -5.1. Collecting anamnesis, analyzing patient complaints, conducting a physical examination at a dental appointment.
		GPC -5.3. Registration of medical documentation of a dental patient in accordance with regulatory requirements.
PC -1.	The ability to conduct an examination of the patient in order to establish a diagnosis.	PC -1.1. Conducting an initial and/or repeated examination of the patient in order to establish a preliminary diagnosis.
PC -2.	The ability to prescribe, control the effectiveness and safety of non-medicamental and medicamental treatment.	PC -2.4. Selection of the type of local anesthesia/anesthesia and assessment of possible complications caused by their use.
PC -7.	The ability to conduct organizational and managerial activities.	PC -7.1. Maintaining medical records.

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-5.	The ability to conduct a patient examination in order to establish a diagnosis when solving professional tasks.	Introduction to the specialty. Materials science. The Latin language. Biological chemistry is the biochemistry of the oral cavity. Human anatomy is the anatomy of the head and neck. Normal physiology is the physiology of the maxillofacial region. Medical informatics.	ALL dental clinical disciplines.
PC-1.	The ability to conduct an examination of the patient in order to establish a diagnosis.	Introduction to the specialty. Materials science. The Latin language. Biological chemistry is the biochemistry of the oral cavity. Human anatomy is the anatomy of the head and neck. Normal physiology is the physiology of the maxillofacial region. Medical informatics.	ALL dental clinical disciplines.
PC-2.	The ability to prescribe, control the effectiveness and safety of non-medicamental and medicamental treatment.	Introduction to the specialty. Materials science. The Latin language. Biological chemistry is the biochemistry of the oral cavity. Human anatomy is the anatomy of the head and neck. Normal physiology is the physiology of the maxillofacial region. Medical informatics.	ALL dental clinical disciplines.

PC-7.	The ability to conduct organizational and managerial activities.	Introduction to the specialty. Materials science. The Latin language. Biological chemistry is the biochemistry of the oral cavity. Human anatomy is the anatomy of the head and neck. Normal physiology is the physiology of the maxillofacial region. Medical informatics.	ALL dental clinical disciplines.

* 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 "Propaedeutics of dental diseases" is 7 credits (252 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**			
			3	**4**		
Contact academic hours		*140*	68	72		
including:						
Lectures (LC)						
Lab work (LW)		140	68	72		
Seminars (workshops/tutorials) (S)						
Self-studies		*67*	*49*	*18*		
Evaluation and assessment (exam/ passing/failing grade)		*45*	*27*	*18*		
Course workload	academic hours_	252	126	126		
	credits	**7**	**4**	**3**		

* 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
Section 1. Propaedeutics of therapeutic dentistry. Module 1,2.	**2nd year - 3 semester.**	
	Topic 1 Examination of the patient in the practice of a dentist. Medical documentation, medical history. Basic and additional examination methods. Instruments for examination of a dental patient. Rules for filling in the dental formula.	**LW**
	Topic 2 The concept of caries, classification. The pathogenesis of the development of the carious process. Methods of caries treatment. The stages of cavity preparation. Isolation of the operating field: cofferdam.	**LW**
	Topic 3 Principles and stages of preparation of carious cavities of the I, Black class and VI class. Elements of the formed cavity. The toolkit. Restoration with various materials. Possible mistakes and complications, their prevention.	**LW**
	Topic 4 Principles and stages of preparation of carious cavities of class V according to Black. Elements of the formed cavity. The toolkit. Restoration with various materials. Possible mistakes and complications, their prevention.	**LW**
	Topic 5 The basic principles and stages of preparation of carious cavities of class II according to Black. Restoration with various materials. Possible mistakes and complications, their prevention.	**LW**
	Topic 6 The basic principles and stages of preparation of carious cavities of class III according to Black. Restoration with various materials. Possible mistakes and complications, their prevention.	**LW**
	Topic 7 The basic principles and stages of preparation of carious cavities of class IV according to Black. Restoration with various materials. Possible mistakes and complications, their prevention.	**LW**
	Topic 8 Colloquium on the section. L.SS.	LW

	Topic 9 The concept of endodontics, periodontitis, periodontitis. The pulp of the tooth, its meaning. Anatomical and topographic features of the structure of the dental cavity of the upper and lower jaw. Indications for endodontic treatment. Methods of treatment of pulpitis. Stages of endodontic treatment. The concept of "opening" and opening of the tooth cavity. Anatomical and topographic landmarks used to open the cavity of an intact tooth. Mistakes in the opening of the tooth cavity and their prevention. L.SS.	**LW**
	Topic 10 Endodontic tools, purpose, standardization. Tools for processing the mouth of the root canal, passage and expansion. Types of movement of instruments in the channel. Methods for determining the working length of the root canal. Mistakes in determining the working length.	**LW**
	Topic 11 A standardized method of root canal treatment. Stages of endodontic treatment of the root canal. Medicinal products for root canal treatment. Methods of chemical expansion of root canals. Mistakes in mechanical and medical treatment of the root canal.	**LW**
	Topic 12 Instrumental and medical treatment of root canals. The "step-back" and "crown-down" methods. Mistakes in mechanical and medical treatment of the root canal.	**LW**
	Topic 13 Devitalizing (necrotizing) agents, their purpose and application of Impregnation methods of pulpitis treatment. Complications in the impregnation methods of pulpitis treatment.	**LW**
	Topic 14 Methods of root canal obturation. The technique of filling root canals with one paste and the method of one (central) pin. Complications, their prevention.	**LW**
	Topic 15 Methods of root canal obturation. The method of lateral and vertical condensation. Complications and their prevention.	**LW**
	Topic 16 Colloquium on the section.	LW
	Topic 17 A credit lesson.	LW
Section 2. Propaedeutics of orthopedic dentistry. Module 3,4.	**2nd year - 4 semester**	**Type of ac. work**
	Topic 1 Biomechanics of lower jaw movements. The concept of the dental, alveolar and basal arches (Kemeni arches). Occlusion, types of bite. Definition of central occlusion, signs.	LW

	Topic 2 Biomechanics of lower jaw movements. The concept of an occlusal surface and an occlusal plane. Articulation and dynamic occlusion. Paths and angles during movements of the mandible in various planes. Occludator, application. Articulator, application.	LW
	Topic 3 Defects of the crown part of the tooth and restoration of the crown by orthopedic methods and surgical procedures. Indications for the use of tabs. Features of preparation of the tooth under the tab. Tab manufacturing methods (direct, indirect).	LW
	Topic 4 Types of artificial crowns, indications for use. Requirements for artificial crowns. Features of preparation of teeth for stamped crowns, tools. Clinical and laboratory stages of manufacturing a stamped crown.	**LW**
	Topic 5 Indications and contraindications for orthopedic treatment of defects in the crown of the tooth and dentition with cast, metal-ceramic, metal-plastic non-removable structures. Materials for their manufacture. Features of dental odontopreparation for cast, metal-ceramic, metal-plastic crowns. Gum retraction and its types. A two-layer impression (impression) is its purpose, materials for removing the impression. Production of a combined collapsible model, materials, methods. The concept of "ledge", its purpose, types. Clinical and laboratory stages of their manufacture.	**LW**
	Topic 6 Cast crowns with plastic and ceramic cladding. Requirements for the frame of such structures and cladding material, their physico-chemical properties. A two-layer impression (impression) is its purpose, materials for removing the impression. Technological features in the manufacture of metal-plastic and metal-ceramic dentures. The method of manufacturing temporary (replacement) structures. Features of odontopreparation of teeth for an all-ceramic crown. Clinical and laboratory stages of manufacturing of all-ceramic structures.	**LW**
	Topic 7 Indications for the treatment of dental defects with bridges, materials used for this purpose. Features of dental preparation in the manufacture of bridges. Clinical and laboratory stages of manufacturing.	LW
	Topic 8 Pin designs: standard and individually made. Clinical and laboratory stages of manufacturing.	**LW**
	Topic 9. Colloquium on the section.	LW

Section 3. Propaedeutics of surgical dentistry. Module 5,6.	Topic 10 Anatomical and topographic features of the structure and innervation of the upper and lower jaw. Anesthetics. Instruments for injection anesthesia. Types of local anesthesia in dentistry. Peripheral (application and infiltration) anesthesia. Types and methods of conducting. Indications for use.	LW
	Topic 11 Methods and methods of conducting conduction anesthesia on the upper jaw.	LW
	Topic 12 Methods and techniques of conducting conductive anesthesia on the lower jaw.	LW
	Topic 13 Indications and contraindications for tooth extraction surgery. The stages of tooth extraction. Features of the structure of forceps for the operation of removing teeth of the upper and lower jaw. Methods of holding forceps.	LW
	Topic 14 Tools, methods and features of tooth extraction and their roots on the upper jaw. The position of the doctor and the patient when removing teeth and their roots on the upper jaw.	LW
	Topic 15 Tools, methods and features of tooth extraction and their roots on the lower jaw. The position of the doctor and the patient when removing teeth and their roots on the lower jaw.	LW
	Topic 16 The technique of removing the roots of teeth on the upper and lower jaw using elevators and a drill. Wound treatment after complex tooth extraction and care for it.	LW
	Topic 17 General and local complications of local anesthesia and tooth extraction surgery. The reasons and tactics of the dentist.	LW
	Topic 18 Colloquium on the section.	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	The lecture-type classroom is equipped with a set of	A set of specialized furniture.

	specialized furniture; a blackboard (screen) and multimedia presentation equipment.	*Technical support*: – multimedia projector, – Internet connection. *Software*: – Microsoft products (the operating system, a suite of office applications, including MSOffice/ Office 365, Teams.)
Lab-work/Seminar	Classrooms are located in buildings: ATI and GUM-SOC. In the ATI building: audiences 249, 250, 251, 252 (the phantom class) и 253. In the GUM-SOC building: audiences 232-235 (the phantom class).	A set of specialized furniture. *Technical support*: Dental simulation units. DLP Optoma H114 Projector. Lenovo Think Centre M71z automated workplace. Laptop Asus X756UVIntel. Projector AcerP1285. Display Elite Screens Spectrum Electric100V. Laptop ASUS X751LDV. Monoblock Dell Optiplex 3030. PC TMO3300 i3 254. Polymerization lamps "Woodpecker". Control units with a micromotor tip. Multimedia projector Sony VPL-C6. Electric screen Projecta PSECO001 Elproelectrol 160x160 sm. MOULAGES patient's head for phantom work in the package. Dental chair with electric drive and programmable position. The doctor's units are

		included. Screen 17" BenQ sc.1472. The screen is on a tripod Projecta, 180x180. Control units of the dental unit for 2 tips and a spray. Blocks of tips "DART 1440". Models of the upper and lower jaw with an articulator. A cupboard for storing sterile instruments. Instruments used in therapeutic, orthopedic and surgical dentistry. Consumables: gypsum, wax, casts, sealing materials, etc. *Information stands and expositions*: – information stand in Russian and English; – visual aids, posters, models.
Self-studies	Classrooms 249, 250, 251, 252, 253 in ATI building. Classrooms 232-235 in GUM-SOC building, Classrooms equipped with a set of specialized furniture and computers with access to EIOS. Halls. The scientific library in the Main building of the RUDN.	

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

7. RESOURCES RECOMMENDED FOR COURSE STUDY

Main readings:

1. A.J.E. Qualtrough, J.D. Satterthwaite, L.A. Morrow, P.A. Brunton. Principles of Operative Dentistry. б.м. : Blackwell Publishing, 2005. ISBN-13: 978-1-4051-1821-7.
2. Hospital, C. F. (2009). Advanced Endodontics. Dharwad, India: R Nageswar Rao.
3. B. Suresh Chandrs, V. (2014). Grossman's Endodontic practice (изд. 13). Chennai, India: Wolters Kluwer Health.
4. ESRA Learning Zone. [В Интернете] 2007 г. http://www.esra-learning.com/.

Additional readings:

1. Shillingburg, H. T. (2012). Fundamentals of Fixed Prosthodontics. (L. Huffman)
2. B. Suresh Chandra, V. Gopikrishna. Grossman's ENDODONTIC PRACTICE. 13. б.м. : Wolters Kluwer, 2014
3. Malamed, Stanley F. Handbook of local anesthesia. 4. б.м. : Mosby, 1997.

Internet-(based) sources:

1. Electronic libraries with access for RUDN students:

- Electronic library system RUDN http://lib.rudn.ru/MegaPro/Web
- ELS « University Library Online » http://www.biblioclub.ru
- ELS Yurayt http://www.biblio-online.ru
- ELS «Student's Consultant » www.studentlibrary.ru
- ELS «Lan» http://e.lanbook.com/
- ELS « Troitsky most»

2. Databases and search engines:

- electronic fund of legal and regulatory and technical documentation http://docs.cntd.ru/
- the Yandex search engine https://www.yandex.ru/
- the Google search engine https://www.google.ru/
- abstract database SCOPUS http://www.elsevierscience.ru/products/scopus/

1. The set of lectures on the course "Propaedeutics of dental diseases".
2. The laboratory workshop (if any) on the course "Propaedeutics of dental diseases".
3. The guidelines for writing a course paper / project (if any) on the course "Propaedeutics of dental diseases".
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.

DEVELOPERS:

Senior lecturer of the Department of Propaedeutics of Dental Diseases, Candidate of Medical Sciences — Manvelyan A.S.

position, department	signature	name and surname

Main lecturer of the Department of Propaedeutics of Dental Diseases, Candidate of Medical Sciences		Gurieva Z.A.
position, department	signature	name and surname

HEAD OF EDUCATIONAL DEPARTMENT:

Head of the Department of Propaedeutics of Dental Diseases, Doctor of Medical Sciences., Professor		Razumova S.N.
name of department	signature	name and surname

HEAD

OF HIGHER EDUCATION PROGRAMME:

Deputy Director of the Medical Institute for the field of Dentistry, Professor		Razumova S.N.
position, department	signature	name and surname