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

Prosthodontics of Edentulous Patient

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

2026

1. COURSE GOAL(s)

The goal of the course « **Prosthodontics of Edentulous Patient** » is to equip students with knowledge and skills in the field of prevention, diagnosis, prosthetic methods of treatment of dentoalveolar diseases; ability of providing outpatient prosthetic care for patients with complete absence of teeth.

2. REQUIREMENTS FOR LEARNING OUTCOMES

Mastering the course **« Prosthodontics of Edentulous Patient »** is aimed at the development of the following competences /competences in part: **(GC)-1, (GPC)-5, 6,(PC)-1,2,6.**

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	GC-1. Being able to implement critical analysis of problem situations basedon systems approach, develop an action strategy.	GC-1.1. Analysing the problem situation as a systemidentifying its components and links between them.
GPC-5	GPC-5. Being able to examine patients to determine a diagnosis when solving professionaltasks	GPC-5.1. Gathering anamnesis by analysing the patient'scomplaints, making a physical examination at a dental appointment.
		GPC-5.2. Formulating a preliminary diagnosis and drawing upa plan for laboratory and instrumental examinations of a dental patient.
		GPC-5.3. Compiling medical documentation for a dental patientin accordance with regulatory requirements.
		GPC-5.8. Conducting differential diagnosis with otherdiseases/conditions, including the urgent ones.
		GPC-5.9. Making a diagnosis based on the current internationalstatistical classification of diseases and health problems.

Competence code	Competence descriptor	Competence formation indicators (within this course)
GPC-6	GPC-6. Being able to prescribe non-drug and drug treatment, monitor itsefficacy and safety when solving professional tasks	GPC-6.1. Developing a plan for dental disease treatment takinginto 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.
		GPC-6.2. Selecting medical products (including dental materials) for drawing up a comprehensive plan for dentaldisease treatment. Following up the treatment of a patient
PC-1	PC-1. Being able to make anexamination of a patient in order to determine a diagnosis.	PC-1.1. Making an initial examination and/or reexamination ofa patient in order to make a preliminary diagnosis.
		PC-1.2. Receiving information from patients (their relatives/legal representatives); conducting a questionnairesurvey 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-1.4. Detecting if patients have risk factors for oncopathology (including various background processes, precancerous conditions) based on laboratory, instrumentaland additional examinations in order to make a preliminary/final diagnosis.

Competence code	Competence descriptor	Competence formation indicators (within this course)
		PC-1.5. Making a preliminary/final diagnosis based on the patient examination; laboratory and instrumentalexaminations.
PC-2	PC-2. Being able to prescribe, monitor the efficacy and safety of non-drug and drug treatment	PC-2.6. Providing orthopaedic treatment for persons with defects in teeth, dentition within the temporization procedure,rehabilitation of single defects in the dentition, dental prostheses of up to three units (excluding dental implants prosthetics), partial and complete removable laminar denture using modern treatment methods approved for use in medical practice.
PC-6.	PC-6. Being able to analyzeand present in public medical information basedon evidence-based medicine, participate in scientific research, introduce new methods and techniques aimed at protecting public health	PC-6.1. Searching for medical information based on evidence- based medicine, interpreting data from scientific publications and/or preparing a presentation to make medical information,the results of scientific research public.

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.	Cariesology and diseases of tooth hard tissues Fixed prosthodontics (simple prosthodontics)	Complex prosthodontics Gnathology and functional diagnostics of temporo-mandibular joint
GPC-5	GPC-5. Being able to examine patients to determine a diagnosis when solving professional tasks	Cariesology and diseases of tooth hard tissues Fixed prosthodontics (simple prosthodontics)	Complex prosthodontics Gnathology and functional diagnostics of temporo-mandibular joint
GPC-6	GPC-6. Being able to prescribe non-drug and drug treatment, monitor its efficacy and safety when solving professional tasks	Cariesology and diseases of tooth hard tissues Fixed prosthodontics (simple prosthodontics)	Complex prosthodontics Gnathology and functional diagnostics of temporo-mandibular joint
PC-1	PC-1. Being able to make an examination of a patient in order to determine a diagnosis.	Cariesology and diseases of tooth hard tissues Propaedeutics of dental diseases Fixed prosthodontics (simple prosthodontics)	Complex prosthodontics Gnathology and functional diagnostics of temporo-mandibular joint
PC-2	PC-2. Being able to prescribe, monitor the efficacy and safety of non-drug and drug treatment	Cariesology and diseases of tooth hard tissues Propaedeutics of dental diseases Fixed prosthodontics (simple prosthodontics)	Complex prosthodontics Gnathology and functional diagnostics of temporo-mandibular joint

PC-6	PC-6. Being able to analyze and present in public medical information based on evidence-based medicine, participate in scientific research, introduce new methods and techniques aimed at protecting public health	Cariesology and diseases of tooth hardtissues Propaedeutics ofdental diseases Fixed prosthodontics (simple prosthodontics)	Complex prosthodontics Gnathology and functional diagnostics of temporo-mandibular joint

4. COURSE WORKLOAD AND ACADEMIC ACTIVITIES

The total workload of the course is 3 credits (108 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
			6
Classroom learning , *ac.h.*		**54**	**54**
including			
Lectures (LC)			
Lab work (LW)		**54**	**54**
Seminars (workshops/tutorials) (S)		-	-
Self-studies, academic hours		*48*	*48*
Evaluation and assessment (exam or pass/fail grading)		*6*	*6*
Total workload of the discipline	ac.h.	**108**	**108**
	credits	**3**	**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

Title of discipline section	Section content (themes)	Type of work
Section 1. Methods of examination, diagnosis of patients with complete absence of teeth.	Topic 1.1 Features of clinical examination of patients with complete tooth loss. Determination of morphological features of hard and soft tissues of the prosthetic bed, degree of atrophy of alveolar ridge bone tissue and jaw bodies. Structure and relationship of edentulous jaws. Classification of edentulous jaws. Compliance and mobility of the oral mucosa. Classification of mucosa according to Supple. Lund's zones. Buffer zones according to E.I. Gavrilov.	LW

Section 2. Methods of prosthetic treatment of patients with edentulous jaws	Topic 2.1 Biophysical and functional factors underlying the fixation of complete removable plate dentures on edentulous jaws. Concept of the valve zone. Anatomical impressions and diagnostic models, methodology for analyzing the prosthetic bed on a plaster model, marking the borders of denture bases for complete edentulism. Obtaining an anatomical alginate impression of the mandible, obtaining a plaster model.	LW
	Topic 2.2 Individual impression trays: purpose, manufacturing methods and materials. Fabrication of an individual impression tray for the maxilla from wax and an individual impression tray for the edentulous mandible from light-curing plastic.	
	Topic 2.3 Fitting of individual trays according to Herbst's technique for the maxilla. Marking with colored pencils on templates of the edentulous maxilla the scheme for correcting individual trays according to Herbst. Obtaining and evaluating the quality of a functional impression of the edentulous maxilla.	
	Topic 2.4 Marking with colored pencils on templates of the edentulous mandible the scheme for correcting individual trays according to Herbst. Justification for selecting impression material for obtaining functional impressions. Obtaining and evaluating the quality of a functional impression of the edentulous mandible.	LW
	Topic 2.5 Types of functional impressions: compressive, stress-breaking, differentiated. Justification for selecting impression material for obtaining functional impressions.	LW
	Topic 2.6 Clinical stage of determining central jaw relation in complete edentulism – Part 1: formation of the prosthetic plane: fitting the base with an occlusal rim for the maxilla (requirements for shaping the vestibular oval and degree of rim visibility from under the lip at rest), familiarization with the rules for working with the Naish apparatus. Familiarization with the rules for working with the Larin apparatus. Formation of the prosthetic plane along the naso-auricular line using the Larin apparatus. Applying non-parallel grooves for registering central jaw relation with the mandibular rim.	LW

	Topic 2.7 Clinical stage of determining central jaw relation in complete edentulism – Part 2: anatomical-physiological method for determining the height of the lower facial third. Mastering the technique for determining the height of the lower facial third in occlusion and at physiological rest (partner exercise). Familiarization with the technique for registering central jaw relation and applying landmarks for tooth placement on the maxillary occlusal rim.	LW
	Topic 2.8 Familiarization with the use of a functionograph for registering the central position of the mandible according to the apex of the Gothic angle.	LW
	Topic 2.9 Patterns of occlusion and articulation of artificial dental arches. Construction of dental arches in complete edentulism with orthognathic occlusion. Familiarization with the technique for selecting the size, shape, and color of artificial denture teeth. Mastering the technique for setting denture teeth for the edentulous maxilla using the Vasiliev's glass table method.	LW
	Topic 2.10 Clinical stage of checking the design of complete removable plate dentures – wax constructions or trial dentures obtained by 3D printing.	LW
	Topic 2.11 Technique for fitting and placing plate dentures in complete edentulism. Rules for use and care of complete removable plate dentures. Technique for determining compression zones of the prosthetic bed and correcting removable dentures. Management tactics for patients in the long term. Adaptation to complete removable dentures.	LW
	Topic 2.12 Clinical errors in prosthetic treatment of patients with complete edentulism. Errors and inaccuracies in obtaining impressions. Errors and inaccuracies in determining central jaw relation. Methods for preventing errors, their diagnosis, and elimination of consequences. Familiarization with the technique for determining the correctness of artificial dental arch formation in the finished denture.	LW

	Topic 2.2. Fabrication of wax rims. Determination of centric relation with edentulous jaws. Anatomic – physiological method of recovery of jaws relation of lower part of the face. Rules of occlusion and articulation of teeth. Design of dentition with edentulous jaws in orthognatic bite. Features of setting teeth in orthognatic and progenic relations of alveolar processes. «Spherical» theory of articulation, it's realisation in practical recovery of dentitions with edentulous jaws. Try-in of wax construction of complete dentures.	LW
	Topic 2.3. Analysis and correction of doctors' and dental technician mistakes in determination of centric relation. Delivery of full dentures. Rules of maintenance and adjustments of full dentures. Patient follow-up. Adaptation to complete dentures.	
Section 3. Clinical and laboratory stages of manufacturing complete dentures	Topic 3.1. Methods of replacing wax with plastic by flask pressing. Base plastics. Polymerization regime for acrylic plastics. Types of defects in plastics when the polymerization regime is violated. Clinical and laboratory stages of manufacturing complete removable dentures with various base designs (plastic, two-layer, with hard palate relief, volumetric modeling).	LW
	Topic 3.2. Technique for manufacturing bases of removable plate dentures using CAD/CAM methods: 3D printing and milling. Advantages and disadvantages.	
	Topic 3.3. Clinical and laboratory stages of manufacturing complete removable dentures with two-layer base designs. Materials and manufacturing methods. Indications, contraindications. Advantages and disadvantages.	
	Topic 3.4. Features of orthopedic treatment of elderly patients with complete edentulism during repeat prosthetics.	

* - 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

Classroom type	Equipment of the classroom	Specialized educational / laboratory equipment, software and materials for mastering the discipline (if necessary)
Self-studies	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.	
Lab-work	Classroom for conducting laboratory work, individual consultations, ongoing assessment, and interim certification, equipped with a set of specialized furniture and equipment.	**Phantom workstations (14 units):** with head phantom featuring silicone cheeks, eyes, ears, and plastic models of edentulous upper and lower jaws **Instrument sets (14 units):** metal examination instrument set in tray, perforated "edentulous" impression trays upper/lower, silicone bowl for mixing alginate, spatulas, measuring cups, rubber bases, plaster knives, electronic scales, vibrating table, safety glasses, articulators, dental laboratory handpieces, metal cement spatulas, Larin apparatus (7 units), Naish apparatus (7 units), light-curing lamp for individual trays (7 units), metal centric device for registering Gothic angle (7 units), electric spatulas, pots for hot water thermostating, brushes for glue, crampon forceps, parallelometers with accessories, periodontal probes, intraoral scanner with laptop and software (2 units), Florida Probe (1 unit), computers with Avantis 3D software (15 units), LCD panel, pulp tester, functionograph, IRIS dental implant orthopedic set, EasyShade device, E220 apparatus, light-curing lamps, protective screens for preparation **CONSUMABLES (per student):** disposable wooden spatulas, alginate impression material (150 g), silicone impression material + catalyst + correcting material (15+50 g), paper block for mixing silicone (0.1), medical plaster (600 g), carbide bur for plastic, denture teeth set for upper jaw (anterior and posterior), sticky wax (5 g), simple pencil 2-4M, articulating paper 100µm horseshoe-shaped (1 sheet),

		baseplate wax (250 g), vaseline oil (3 ml), cotton pads (5 pcs), paper napkins (4 pcs), lacquer for separating plaster from plastic (5 ml), light-curing plate for individual trays (2 pcs) **TEACHING AIDS (for group of 14):** articulators with plaster models of edentulous upper and lower jaws (14 units), visual aid with stages of manufacturing complete removable plate dentures (1 set), complete removable plate dentures with plastic, metal, two-layer, printed, and milled bases for complete edentulism (1 each), plastic models for complete edentulism upper/lower jaw (14 each), occludator with Vasiliev plastic table and phantom complete removable plate denture with incomplete set of artificial teeth for setting 4 denture teeth (14 units)

7. RECOMMENDED SOURSES FOR COURSE STUDY

Main readings:

1. Veeraiyan, D. N. Essentials of Prosthodontics / D. N. Veeraiyan. — New Delhi : Jaypee Brothers Medical Publishers (P) Ltd, 2024. — 492 p. — ISBN 978-93-5465-819-8. https://www.jaypeedigital.com/eReader/chapter/9789354658198/ch9

2. Orthopedic dentistry: textbook / S.D. Arutyunov, E.A. Bragin, S.I. Burlutskaya [and others]; edited by E.S. Kalivradjian, I.Yu. Lebedenko, E.A. Bragin, I.P. Ryzhova. - 3rd ed., Rev. and add. - M.: GEOTAR-Media, 2020 .-- 800 p. : ill. - ISBN 978-5-9704-5272-1: 2200.00.
3. A guide to practical exercises in prosthetic dentistry: for students of the 3rd year: Textbook for students, training. by special 060105 (040400) - Dentistry / Ed. I.Yu. Lebedenko.- M .: Practical medicine, 2012.- 368 p .: ill.

Additional readings:

1. Recording and maintaining a medical record in the clinic of orthopedic dentistry: Textbook / Ed. T.I. Ibragimov. - M .: GEOTAR - Media, 2013. - 223 p.
2. Orthopedic dentistry: national leadership / ed. I.Yu. Lebedenko, S. D. Arutyunova, A.N. Ryakhovsky. - GEOTAR - Media, 2016 .-- 824 p.
3. Zagorskiy V.A. Prosthetics with complete adentia: a guide for physicians.- M .: Medicine, 2008. - 376p.
4. Orthopedic treatment of patients with complete absence of teeth: textbook. allowance: [in the specialty 060105 (040400) "Dentistry"] / A. P. Voronov, I. Yu. Lebedenko, I. A. Voronov. - 2nd ed., Rev. and add. - Moscow: MEDpress-inform, 2009 .-- 343 p. : col. ill., tab. - ISBN 5-98322-551-0

Resources of the information and telecommunications network "Internet":

1. RUDN ELS and third-party ELS, to which university students have access based on concluded agreements:
- RUDN Electronic Library System - RUDN EBS http://lib.rudn.ru/MegaPro/Web
- ELS "University Library Online" http://www.biblioclub.ru
- EBS Yurayt http://www.biblio-online.ru
- ELS "Student Consultant" www.studentlibrary.ru
- EBS "Lan" http://e.lanbook.com/
- EBS "Trinity Bridge"

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.elsevierscience.ru/products/scopus/

Educational and methodological materials for independent work of students in the development of the discipline of the discipline "Prosthodontics of edentulous patient":

1. Electronic versions of textbooks
2. Presentations on the topics of the classes
3. Video materials

posted in accordance with the current procedure on the discipline page in TUIS!

1. A course of lectures on the discipline "_____".
2. Laboratory workshop on the discipline "_____" (in the presence of laboratory work).
3. Guidelines for the implementation and execution of a term paper / project in the discipline "_ " (if there is a CG / CP).
4.

* - 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!

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 (GC-1, GPC-5, 6, PC- 1, 2, 6) 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:

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of Prosthetic Dentistry		Lebedenko I. Yu.
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