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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**

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

## **COURSE SYLLABUS**

### **Prosthodontics of Edentulous Patient**

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course title

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

### **31.05.03 Dentistry**

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field of studies / speciality code and title

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

### **Dentistry**

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higher education programme profile/specialisation title

## 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 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-5	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-5.8. Conducting differential diagnosis with other diseases/conditions, including the urgent ones.
		GPC-5.9. Making a diagnosis based on the current international statistical 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 its efficacy and safety when solving professional tasks	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.
		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
PC-1	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-1.4. Detecting if patients have risk factors for oncopathology (including various background processes, precancerous conditions) based on laboratory, instrumental and 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 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	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*
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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 temporomandibular 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 temporomandibular 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 temporomandibular 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 temporomandibular 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 temporomandibular 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 hard tissues Propaedeutics of dental diseases Fixed prosthodontics (simple prosthodontics)	Complex prosthodontics Gnathology and functional diagnostics of temporomandibular joint
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#### 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 , <i>ac.h.</i>		
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
<b>Total workload of the discipline</b>	ac.h.	<b>108</b>
	credits	<b>3</b>

\* 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
<b>Module 1</b> Methods of survey, diagnostics of patients with edentulous jaws	<b>1.1.</b> Peculiarities of clinical survey of patients with edentulous jaws. Definition of morphological peculiarities hard and soft tissues of prosthetic field, the degree of	LW

Course module title	Course module contents (topics)	Academic activities types
	<p>atrophy of the bone tissue of the alveolar processes and the body of the jaws, compliance of mobility of the mucosa. Classification of edentulous jaws. Compliance and mobility of the oral cavity mucosa. Classification of mucosa by Supple. Zones by Lund. Buffer zones by Gavrilov. Structure and relation of edentulous jaws.</p>	
<p><b>Module 2</b> Methods of prosthetic treatment of patients with edentulous jaws</p>	<p>Fixation and stabilization of complete dentures. Biophysical and functional factors laying in the basis of fixation of complete dentures on edentulous jaws. Meaning of flap zone. Anatomical impressions, method of taking impression, materials. Individual trays, characteristics, methods of fabrication and materials that are used. Adjustment of individual trays by Gerbst. Impression materials. Obtaining and assessment of functional impressions. Justification of the choice of impression material for getting functional impressions. The borders of denture's basis with edentulous jaws. 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.</p> <p>Try-in of wax construction of complete dentures. 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.</p>	<p>LW</p>

Course module title	Course module contents (topics)	Academic activities types
<b>Module 3</b> Clinical and laboratory stages of manufacturing complete dentures	Injection molding of acrylic resin. Methods of flasking of dentures. Types of resin for denture base. Polymerization mode. The consequences of violating the polymerization mode. Clinical and laboratory stages of manufacturing of complete denture with various base (acrylic, double-layered, replication of palatal rugae). The peculiarities of prosthetic treatment of toothless patients with the decreased vertical dimension of occlusion (VDO), secondary prosthetic treatment, mucosal diseases and gag reflex. Bilayer basis of complete dentures with edentulous jaws. Indications, manufacturing procedure.	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)



Type of academic activities	Classroom equipment	Specialised educational / laboratory equipment, software, and materials for course study (if necessary)
<b>Lab work</b>	<p>equipped with special furniture: desk for 2 students – 13, a chair for the teacher – 2, screen, PC, camera with a tripod, metal locker for the equipment, locker for the materials and</p> <p>instruments – 6, sink, trash can 200 liters, glass case with dentures, safe with 4 sections for burs and handpieces.</p>	<p>Specialized learning/lab equipment and materials:            UV polymerizing lamp for custom trays – 7. Dental lab handpieces – 14            Electric dental waxer – 14 Water bath – 4            Glass case with dentures Rim former – 7            Larin apparatus – 7            Jaw recording device – 1</p> <p>Instruments:            Gymsum models of edentulous jaws – 14 sets Complete dentures – 14 sets            Base wax – 12 sets            Silicon impression material (wash) – 300 g per group            Impression trays for edentulous upper jaw and lower jaw – 14 sets Light cured plates for custom trays – 2 per student            Vaseline oil – 14 jars with brushes            Glass for mixing silicon wash – 14            Plasticine of different colours – 7 sets per group Burs for acrylic resin – 14</p>
Lab work	<p>equipped with dental simulators "Saratoga S.p.a" (steel body, painted with powder enamel, table top made of artificial stone, table lamp, Philips monitor, pull-out blocks for doctor [2 turbine hoses M4] and assistant [multifunctional pistol, saliva suction, vacuum cleaner], multifunctional pedal, Venturi aspiration system with a centralized electric pump, dental phantom models FRASACO (Germany) on a minitorce with an articulator, models of FRASAKO toothless upper and</p>	<p>Special study/lab equipment and materials:</p> <ul style="list-style-type: none"> <li>• Vibrating table portable - 4</li> <li>• Trimmer -1</li> <li>• Vacuum plaster mixer - 1</li> <li>• Scales for plaster</li> <li>• Steam jet for cleaning dentures – 1</li> </ul> <p>Instruments:</p> <ul style="list-style-type: none"> <li>• Disposable examination kits 400 kits</li> <li>• Low-speed straight</li> </ul>

Type of academic activities	Classroom equipment	Specialised educational / laboratory equipment, software, and materials for course study (if necessary)
	<p>lower jaws with a face mask and pneumatic or mechanical adjustment of the phantom position on 2 axes in the form of a long table for 12 vis-a-vis and 2 four-seater modules in the form of a "daisy". Wooden chair with a back on wheels for a dental technician -20.</p> <p>Special stainless steel sink with two sinks and plaster sump.</p> <p>Plaster tables for 14 workplaces.</p> <p>Waste bin mobile with a lid of 250 liters.</p> <p>Dental chair with a lamp and a Frasaco phantom chaise with an articulator, models of edentulous upper and lower jaws, a face mask and mechanical adjustment of the phantom position along 2 axes.</p> <p>Wall screen and multimedia projector Epson. Dell LCD panel with a diagonal of at least 120cm.</p>	<p>handpieces -14</p> <ul style="list-style-type: none"> <li>• Burs for processing plastics 14</li> <li>• Models of edentulous upper and lower jaws - 14 sets</li> <li>• Spatulas for mixing gypsum -14</li> <li>• Silicone flasks for mixing gypsum-14,</li> <li>• Plaster knife - 14</li> <li>• Dental spatula - 14 pcs.</li> <li>• Table lamps on brackets- 14 pcs</li> <li>• Toothless impression trays for the upper and lower jaws, metal perforated, 14 per group</li> <li>• Alginate mass 200 g per student</li> <li>• Plaster of paris 2 class 500 g per student</li> <li>• Set teeth for setting on the upper and lower jaws 28 pcs - 14 sets per group</li> <li>• Articulating paper 100 microns thick - 2 sheets for each student</li> </ul>

## 7. RECOMMENDED SOURSES for COURSE STUDIES

### *Main readings:*

1. 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.
2. 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

### *Internet (based) sources*

- 1. Electronic libraries with access for RUDN students:
  - Electronic library network of RUDN – ELN RUDN <http://lib.rudn.ru/MegaPro/Web>
  - ELN «University Library online» <http://www.biblioclub.ru>
  - ELN Urait <http://www.biblio-online.ru>
  - ELN «Student Advisor» [www.studentlibrary.ru](http://www.studentlibrary.ru)
  - ELN «Lan» <http://e.lanbook.com/>
- 2. Databases and search engines:
  - electronic fund of legal and regulatory and technical documentation <http://docs.cntd.ru/>
  - search system Yandex <https://www.yandex.ru/>
  - search system Google <https://www.google.ru/>
  - abstract database SCOPUS <http://www.elsevierscience.ru/products/scopus/>

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

1. The set of lectures on the course «**Prosthodontics of Edentulous Patient**»
2. The laboratory workshop (if any).on the course «**Prosthodontics of Edentulous Patient**»
3. The guidelines for writing a course paper / project (if any) on the course «**Prosthodontics of Edentulous Patient**».
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 (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:**

Professor of the Department  
of prosthetic dentistry

Bykova M. V.

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position, department

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signature

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name and surname

**HEAD OF EDUCATIONAL DEPARTMENT:**  
of Prosthetic Dentistry

Lebedenko I. Yu.

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name of department

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name and surname

**HEAD  
OF HIGHER EDUCATION PROGRAMME:**

First Deputy Director of  
Medical Institute for academic  
affairs

Razumova S.N.

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position, department

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signature

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name and surname