**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**

**Medical Rehabilitation**

course title

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

**31.05.03 Dentistry**

Field of studies / specialty code and title

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

**Dentistry**

Higher education program profile/specialization title

**2024-2025**

# 1. COURSE GOAL(s)

The goal of the course «**Medical Rehabilitation**» is to equip students with the knowledge connected to the medical rehabilitation, form the concept of "medical rehabilitation" among students, a complete view of its modern capabilities, an idea of the basics of medical rehabilitation, which concerns the main aspects of planning and conducting rehabilitation activities.

# 2. REQUIREMENTS FOR LEARNING OUTCOMES

Mastering the course (module) «**Medical Rehabilitation**» is aimed at the development of the following competences /competences in part: GC -1, GC-8, GPC-7, GPC-9, GPC-12, GPC-13, PC-1, PC-3, PC-4.

*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. Analyzing the problem situation as a system identifying its components and links between them. |
| | | GC-1.2. Defining gaps in the information required to deal with a problem situation and designing processes to address them. |
| | | GC-1.3. Assessing in a critical way the reliability of information sources; working with contradictory information from different sources. |
| | | GC-1.4. Developing and giving meaningful reasons for and against a strategy for solving a problem situation in terms of a systematic and interdisciplinary approaches. |
| | | GC-1.5. Using logical and methodological tools for critical assessment of the modern concepts of a philosophical and social nature in the relevant field of study. |
| GC-8. | Being able to create and maintain safe conditions in everyday life and professional activity to protect natural environment, ensure sustainable development of society, including in the event of a threat and occurrence of emergencies and military conflicts. | GC-8.1. Analyzing the factors of harmful impact on the vital functions of the elements of the environment (technical means, technological processes, materials, buildings and structures, natural and social phenomena). |
| | | GC-8.2. Identifying hazardous and harmful factors within the framework of the carried out activities. |
| | | GC-8.3. Solving problems related to unsafe behavior and participating in activities to prevent emergencies in the workplace. |

| Competence code | Competence descriptor | Competence formation indicators (within this course) |
|---|---|---|
| | | GC-8.4. Observing and explaining the rules of behavior in case of emergencies of natural and man-made origin; providing first aid; participating in recovery activities. |
| GPC-1. | Being able to implement moral standards and legal regulations, ethical and deontological principals in professional activity. | GPC-1.1. Observing bases of medical ethics and deontology; legal bases in healthcare; legal aspects of medical practice. |
| | | GPC-1.2. Applying ethical standards and principles of a medical worker's behavior when performing their professional duties; being aware of the latest health legislation when solving professional problems; applying the rules and norms of the doctor's interaction with colleagues and patients (their legal representatives). |
| GPC-4. | Being able to monitor the effectiveness of preventive measures, healthy lifestyle formation and sanitary and hygienic education of the population. | GPC-4.1. Analyzing the awareness of the population of a healthy lifestyle and medical literacy. |
| | | GPC-4.2. Developing a plan to improve sanitary culture and prevent diseases of the population, organizational and methodological measures aimed at increasing the awareness of the population of a healthy lifestyle, its literacy in dental disease prevention. |
| | | GPC-4.3. Preparing an oral presentation or a printed text that promotes a healthy lifestyle and increases the literacy of the population concerning dental disease prevention. |
| 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. |
| | | GPC-6.3. Assessing the possible side effects of taking medicinal drugs. |
| | | GPC-6.4. Providing medical care to a dental patient in emergency or urgent forms. |

| Competence code | Competence descriptor | Competence formation indicators (within this course) |
|---|---|---|
| | | GPC-6.5. 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-6.6. Organizing personalized treatment of a dental patient, including elderly and senile patients, pregnant women, children with somatic pathologies; evaluating the efficacy and safety of treatment. |
| | | GPC-6.7. Prescribing medicinal drugs, medical devices, taking into account the diagnosis, age and clinical picture, and 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 medical care standards. |
| | | GPC-6.8. Prescribes non-drug treatment taking into account the diagnosis, age and clinical picture of the disease 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 medical care. |
| | | GPC-6.9. Evaluates the effectiveness and safety of the use of medicines, medical devices and other methods of treatment at a dental appointment. |
| GPC-7. | Being able to organize work and take professional decisions in case of emergency conditions, amid emergencies, epidemics, and in the foci of mass destruction. | GPC-7.1. Being able to use the algorithm for providing first aid in emergency conditions, including in extreme conditions and foci of mass destruction. |
| | | GPC-7.2. Identifying conditions requiring emergency medical care, including clinical signs of sudden cessation of blood circulation and acute respiratory failure. |
| | | GPC-7.3. Providing emergency medical care to patients with conditions that pose a threat to the patient's life, including clinical death (cessation of the vital bodily functions (blood circulation and (or) breathing). |

| Competence code | Competence descriptor | Competence formation indicators (within this course) |
|---|---|---|
| | | GPC-7.4. Using drugs and medical products when providing emergency medical care. |
| GPC-9. | Being able to assess morpho-functional, physiological conditions and pathological processes in the human body to solve professional tasks. | GPC-9.1. Being able to use the algorithm of clinical, laboratory and functional diagnosis in dealing with professional tasks. |
| | | GPC-9.2. Evaluating the results of clinical, laboratory and functional diagnosis in dealing with professional tasks. |
| | | GPC-9.3. Determining morpho-functional, physiological states and pathological processes of the human body. |
| GPC-12. | Being able to implement and monitor the effectiveness of medical rehabilitation of a dental patient. | GPC-12.1. Developing optimal tactics for the treatment of oral pathology in children and adults taking into account the general somatic disease and further rehabilitation of a patient. |
| | | GPC-12.2. Applying methods of complex rehabilitation of patients with dental diseases taking into account the general condition of the body and the presence of concomitant pathology. |
| GPC-13. | Being able to understand the operation principles of modern IT and use them to solve the professional tasks. | GPC-13.1. Using information technology in professional activity and observing the information security rules. Information and communication media and technology in professional activity. |
| | | GPC-13.2. Observing the information security rules in professional activity. |
| 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. |

| Competence code | Competence descriptor | Competence formation indicators (within this course) |
|---|---|---|
| | | 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. |
| | | 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-3. | Being able to develop, implement and monitor the effectiveness of individual rehabilitation programs. | PC-3.1. Providing qualified medical care in the specialty using modern rehabilitation methods approved for use in medical practice. |
| | | PC-3.2. Drawing up an individual rehabilitation plan for a patient with diseases of the maxillofacial area. |
| | | PC-3.3. Monitoring and selecting medicinal drugs for patient rehabilitation. |
| PC-4. | Being able to conduct and monitor the effectiveness of sanitary, anti-epidemic and other preventive measures to protect public health. | PC-4.1. Conducting brief preventive counseling, preventive examinations of the population and measures to reduce morbidity, including infectious diseases, disability, mortality, lethality. |
| | | PC-4.2. Drawing up a plan of preventive dental care for patients and selecting drugs and medical devices in the Dental Materials category for preventing dental diseases; monitoring their implementation. |
| | | PC-4.3. Providing qualified medical care in their specialty using modern prevention methods approved for use in medical practice. |
| | | PC-4.4. Organizing monitoring the prevention of diseases of the oral mucosa and lips, including oncological and hygienic prevention and secondary prevention of oncological neoplasms, with the exception of specialized appointments for the treatment of pre-cancers of the oral mucosa and lips. |

## 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.

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 | Being able to implement critical analysis of problem situations based on systems approach, develop an action strategy. | Physics; Mathematics; Human Anatomy - Anatomy of Head and Neck; Normal Physiology- Physiology of Maxillofacial Region; Pathophysiology - Pathophysiology of Head and Neck; Pharmacology; Biological Chemistry - Oral Biochemistry; Public Health and Healthcare, Economics | Clinical dentistry; Other clinical disciplines |
| GC-8. | Being able to create and maintain safe conditions in everyday life and professional activity to protect natural environment, ensure sustainable development of society, including in the event of a threat and occurrence of emergencies and military conflicts. | Epidemiology; Health and Safety | Disaster Medicine |
| GPC-1. | Being able to implement moral standards and legal regulations, ethical and deontological principals in professional activity. | Bioethics; History of Medicine | Law sciences |
| GPC-4. | Being able to monitor the effectiveness of preventive measures, healthy lifestyle formation and sanitary and hygienic education of the population. | Hygiene; Prevention and Public Dental Health | Pediatric Dentistry; Orthodontics and Pediatric Prosthodontics |

| Competence code | Competence descriptor | Previous courses/modules* | Subsequent courses/modules* |
|---|---|---|---|
| GPC-6. | Being able to prescribe non-drug and drug treatment, monitor its efficacy and safety when solving professional tasks | Internal Medicine; Clinical Pharmacology; General Surgery; Surgical Diseases; Health and Safety | Immunology, Clinical Immunology; Clinical Dentistry |
| GPC-7. | Being able to organize work and take professional decisions in case of emergency conditions, amid emergencies, epidemics, and in the foci of mass destruction. | Health and Safety; Biology; Biological Chemistry - Oral Biochemistry; Topographic Anatomy and Operative Surgery of Head and Neck; Immunology, Clinical Immunology | Disaster Medicine |
| GPC-9. | Being able to assess morpho-functional, physiological conditions and pathological processes in the human body to solve professional tasks. | Health and Safety; | Disaster Medicine |
| GPC-12. | Being able to implement and monitor the effectiveness of medical rehabilitation of a dental patient. | Surgical Diseases; Internal Medicine; Pediatrics; Obstetrics; Neurology | Clinical Dentistry; |
| GPC-13. | Being able to understand the operation principles of modern IT and use them to solve the professional tasks. | Physics; Medical Informatics; Human Anatomy - Anatomy of Head and Neck; Pharmacology | Clinical Dentistry; |
| PC-1 | Being able to make an examination of a patient in order to determine a diagnosis. | Immunology, Clinical Immunology; Health and Safety; Operative Dentistry: Cardiology and Hard Tissues Diseases; Endodontics; Gerodontics and Oral Mucosa Diseases; Periodontology; Gnathology and Temporo-Mandibular Joint's Functional Diagnostics; Prosthodontics (Simple | Clinical Dentistry; |

| Competence code | Competence descriptor | Previous courses/modules* | Subsequent courses/modules* |
|---|---|---|---|
| | | Prosthetics); Prosthodontics of Edentulous Patient; Prosthodontics (Complex Prosthetics); Prosthodontics (Complex Prosthetics); Pediatric Maxillofacial Dentistry; Maxillofacial Prosthodontics; Pediatric Dentistry; Orthodontics and Pediatric Prosthodontics; Medical Genetics in Dentistry | |
| PC-3. | Being able to develop, implement and monitor the effectiveness of individual rehabilitation programs. | Physiotherapy of Dental Diseases | Clinical Dentistry; |
| PC-4. | Being able to conduct and monitor the effectiveness of sanitary, anti-epidemic and other preventive measures to protect public health. | Epidemiology; Prevention and Public Dental Health | Clinical Dentistry; |

## 4. COURSE WORKLOAD AND ACADEMIC ACTIVITIES

The total workload of the course is "Medical Rehabilitation" 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 | |
|---|---|---|---|
| | | 9 | |
| Classroom learning , *ac.h.* *including* | **72** | **72** | |
| Lectures ( LC ) | | | |
| Lab work ( LW ) | **48** | **48** | |
| Seminars (workshops/tutorials) ( S ) | | | |
| Self-studies | *21* | *21* | |
| Evaluation and assessment (exam/ passing/failing grade) | *3* | *3* | |

| Type of academic activities | | Total academic hours | Semesters/training modules | |
|---|---|---|---|---|
| | | | 9 | |
| **Course workload** | academic hours | **72** | **72** | |
| | credits | **2** | **2** | |

## 5. COURSE CONTENTS

*Table 5.1. Course contents and academic activities types*

| Type of academic activities | Total academic hours | Semesters/training modules |
|---|---|---|
| Basics of rehabilitation. (Part 1) | Types of rehabilitation. Stages of medical rehabilitation. | LW |
| Basics of rehabilitation. (Part 1) | The concept of a multidisciplinary rehabilitation team. Habilitation. | LW |
| Disability. | Basic concepts of disability. Medical and social expertise. | LW |
| Rehabilitation features of patients of different age categories. | Principles of medical rehabilitation depending on the age of the patient. | LW |
| Means and methods of medical rehabilitation. | Basic means and methods used in medical rehabilitation | LW |
| Ergo therapy. | Basic concepts, methods of ergo therapy | LW |
| General physiotherapy. | Principles of physiotherapy. Physical Factors in Physiotherapy. | LW |
| Massage. Assessment scales in rehabilitation | Basic principles, indications and contraindications for massage therapy. Basic rehabilitation scales. | LW |
| Spa treatment - the third stage of rehabilitation (part 1) | Fundamentals of balneology. | LW |
| Sanatorium-resort treatment (part 2). | Physical and natural factors used in medical rehabilitation. | 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 | Multimedia projector, Internet access | Sets of videos, multimedia presentations made by the |

| Type of academic activities | Classroom equipment | Specialised educational / laboratory equipment, software, and materials for course study (if necessary) |
|---|---|---|
| | | department. |
| Computer lab | Classes are equipped with access to the RUDN electronic library system, the Internet | Computer/laptop with installed software. |
| Self-studies | Classroom for student's self-studies (can be used for seminars and consultations.) | Computer/laptop with installed software. technical equipment: multimedia projector. Installed software. multimedia projector with screen - Sets of videos, multimedia presentations made by the department |

# 7. RESOURCES RECOMMENDED FOR COURSE STUDY

*Main readings:*

- Meditsinskaya reabilitatsiya: uchebnik / pod red. A.V. Yepifanova, Ye.Ye. Achkasova, V.A. Yepifanova. M.: GEOTAR Media, 2015. 668s.
- // Bulletin of the Peoples' Friendship University of Russia: Medicine.- 2020. - № т. 24 (1). - С. 26 - 37.
-  Obshchaya fizioterapiya: uchebnik / Ponomarenko G.N., M.; GEOTAR-Media, 2014.
- Meditsinskaya reabilitatsiya : uchebnik./ Ponomarenko G. N. – M.: GEOTAR-MED, 2014.
- Vosstanovitel'naya meditsina. Uchebnoye posobiye dlya studentov. Pod.red. O.I. Leyzerman i dr. Rostov n/D.: Feniks, 2008.
- Eremushkin MA. Fundamentals of rehabilitation. Textbook-M.: Publishing Center "Academy", 2014. - 208 p.
- Korolev A. A., Sobolevskaya Yu. A., Rudakova SM., Kukelev Yu. V., Kamaeva A.V., Shipulina G. V., Martynyuk MD. Meditsinskaya reabilitatsiya: uchebnoe posobie [Medical rehabilitation: a textbook]. the center is in an emergency. and radiats. A. M. Nikiforov Ministry of Emergency Situations of Russia. Saint Petersburg: Politechnika — service Publ., 2014, 184 p. (in Russian)
- Ponomarenko G. N. Fizioterapiya: natsionalnoe rukovodstvo [Physical therapy: a national guide], Moscow: GEOTAR-Media Publishing Group, 2014, 864 p.
- Popov S. N. Physical rehabilitation. In 2 tons. Study guide for students institutions of higher medical Prof. educational institutions. Vol. 1. - Moscow: Publishing center "Akademiya", 201 p. - 288s.
- Popov S. N. Physical rehabilitation. In 2 tons. Study guide for students institutions of higher medical Prof. educational institutions. Vol. 2. - M.: Publishing center "Academy", 2013. - 304s.

*Additional readings:*

- Fizicheskaya i reabilitatsionnaya meditsina: natsional'noye rukovodstvo/ pod red. G. N. Ponomarenko. – M.: GEOTAR-Media, 2016. – 688 s.
- Fizicheskaya reabilitatsiya invalidov i lits s otkloneniyami v sostoyanii zdorov'ya. V.I. Dubrovskiy, A.V. Dubrovskaya. M.: «BINOM», 2010.

- Osnovy reabilitatsii.- Uchebnoye posobiye. M.A. Yeremushkin, M.: Izdat. Tsentr Akademiya. 2011. Bogolyubov V.M. Fizioterapiya i kurortologiya, 3 toma, Moskva, 2009
- Bogolyubov V. M. Medical rehabilitation. Kniga-Moscow: Binom Publishing House, 2010. - 416 p.
- Bogolyubov V. M. Medical rehabilitation. Kniga P-M.: Binom Publishing House, 2010. -424 p.
- Bogolyubov V. M. Medical rehabilitation. ILI Book-Moscow: Binom Publishing House, 2010. - 368 p.
- Agasarov L. G. Technologies of rehabilitation treatment in dorsopathies. Moscow: Vuzovsky uchebnik: INFRA-M, 2010, 96 p. (in Russian).
- Zhernov V. A., Zubarkina M. M. Medical rehabilitation. Hirudotherapy and hirudoreflexotherapy. Uchebnoe posobie [Textbook], Moscow: RUDY Publishing House, 2013, 53 p. (in Russian).
- Zhernov V. A., Zubarkina M. M. Hirudotherapy as a corrective technology of restorative medicine. Uchebnoe posobie [Textbook], Moscow: RUDN Publishing House, 2006, 55 p. (in Russian).
- Zhernov V. A. Restorative medicine. Reflexology. Training manual. Moscow: RUDN Publishing House, 2004, 53 p. (in Russian).

### *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
    - 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 "Medical Rehabilitation"
2. The laboratory workshop (if any).on the course "Medical Rehabilitation"
3. The guidelines for writing a course paper / project (if any) on the course "Medical Rehabilitation".
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, GC-8, GPC-7, GPC-9, GPC-12,  GPC-13, PC-1, PC-3, PC-4) upon the course study completion are specified in the Appendix to the course syllabus.

**DEVELOPERS:**

| | | |
|---|---|---|
| Professor of the Department of Anesthesiology and Resuscitation with Medical Rehabilitation | | A.V.Grechko |
| position, department | signature | name and surname |
| Associate professor of the Department of Anesthesiology and Resuscitation with Medical Rehabilitation Course | | A.I.Shpicko |
| position, department | signature | name and surname |
| Assistant of the Department of Anesthesiology and Resuscitation with Medical Rehabilitation Course | | N.P.Shpicko |
| position, department | signature | name and surname |

**HEAD OF EDUCATIONAL DEPARTMENT:**

| | | |
|---|---|---|
| Department of Anesthesiology and Resuscitation with Medical Rehabilitation Course | | M.V.Petrova |
| name of department | signature | name and surname |

**HEAD
OF HIGHER EDUCATION PROGRAMME:**

| | | |
|---|---|---|
| First Deputy Director of MI for Academic Affairs in the field of Dentistry | | S.N. Razumova |
| position, department | signature | name and surname |