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

Telemedicine

course title

Recommended by the Didactic Council for the Education Field of:

31.05.01 General Medicine

field of studies / speciality code and title

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

General Medicine

higher education programme profile/specialisation title

2023-2024

1. COURSE GOAL(s)

The goal of the course "Telemedicine" is to equip students with the new knowledge in the field of information technology, namely the use of remote technologies in healthcare practice with emergency and planned teleconsultative and medical assistance to patients who are at a considerable distance from the consultant doctor, including during emergency response, tele-education and advanced training of medical personnel, patronage of pregnant women and patients with chronic diseases, monitoring of patients in a distributed home hospital, supervising mobile patients with personal life support equipment**.**

2. REQUIREMENTS FOR LEARNING OUTCOMES

Mastering the course (module) "Telemedicine" is aimed at the development of the following competences /competences in part**:** GPC-10.

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

Competence code	**Competence descriptor**	**Competence formation indicators** (within this course)
GPC-10	GPC-10. Being able to understand the operation principles of modern IT and use them to solve professional tasks	GPC-10.1. Being able to use information technology in professional activity.
		GPC-10.2 Being able to observe the information security rules in professional activity.
		GPC-10.3. Being able to use information and communication technologies, including applied software for general and special purposes in dealing with professional tasks.

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-10	Being able to understand the operation principles of modern IT and use them to solve professional tasks	Medical informatics, Obstetrics and Gynecology, Therapy, Surgery, Public health and healthcare, Health Economics	OVP

* 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 "Telemedicine" 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			
			12			
Contact academic hours		34	34			
including:			-	-	-	-
Lectures (LC)		-	-	-	-	-
Lab work (LW)						
Seminars (workshops/tutorials) (S)		34	34			
Self-studies						
Evaluation and assessment (exam/passing/failing grade)		38	38			
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
Module 1 Introduction to telemedicine	**Topic 1.1** Basic term. the goals of telemedicine today	S
		S
	Topic 1.2 The telemedicine as a new form of healthcare organization	
Section 2 technological equipment of	**Topic 2.1** Practical experience of leading telemedicine centers.	S

telemedicine activities.	**Topic 2.2** An encoding and decoding information standards	S
Section 3 scenarios of telemedicine activities	**Topic 3.1** Ethical and deontological aspects of telemedicine	S
	Topic 3.2 Hardware and software of telemedicine	S

* - 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	An auditorium for lecture-type classes, equipped with a set of specialized furniture; board (screen) and technical means of multimedia presentations.	Hardware and software: Videoconferencing complex. Collaborate Pro900 communications; Notebook Asus K756UJ90NB0A21M00890; Eaton 9130RM 1500BA uninterruptible power supply; LCD monitors ASUS VX279H Black; professional A3 scanner for graphics Microtek ScanMaker 9800XL; Document camera on a platform with a built-in light tablet AVerVision PL50; D-Link DCS-2230 Wireless Full HD Night Camera; ASUS RT-N66U 802.11n router; Tablet Apple iPad Air 2; NEC MultiSync E425 LCD Panel + Kromax TV Wall Mount; Acoustic system included (ceiling-mounted acoustic system LS6CT-5.
Type of academic activities	**Classroom equipment**	**Specialised educational / laboratory equipment, software, and materials for course study** (if necessary)

Lab work	An auditorium for laboratory work, individual consultations, current control and intermediate certification, equipped with a set of specialized furniture and equipment.	
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.	
Computer lab	A computer class for conducting classes, group and individual consultations, current control and intermediate certification, equipped with personal computers (in the amount of 15), a board (screen) and technical means of multimedia presentations.	Hardware Monoblock Acer Aspire C24-865 (UV-000000000006520-6534); Multimedia projector Epson EB-965H; SMART Board SBM685 interactive whiteboard Software: Microsoft products (OS, office suite, including MS Office/Office 365, Teams, Skype)

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

7. RESOURCES RECOMMENDED FOR COURSE STUDY

Main readings:

1. V.Stolyar, M.Amcheslavskaya, V.Fedorov Remote interactive training for doctors based on video conference solutions: 20-years experience Proc. 9 IEEE International conference on Ubi-Media Computing Moscow, p.360-362, ISBN 978-5-88835-045-4. 2016

2. Stolyar V.L. Amcheslavskaya Textbook "Telemedicine: tasks, technologies, prospects" Moscow RUDN University 2020

3. Stolyar V.L. Amcheslavskaya Tutorial "Lecture course on the basics of telemedicine" Moscow 96 with RUDN University 2017

4. Amcheslavskaya M.A. Stolyar V.L. Educational and methodological manual "Methodological recommendations for conducting a video consultation" Moscow 7 with RUDN University 2017

Additional readings:

1. Amcheslavskaya M.A. Stolyar V.L. Arctic telemedicine Materials of the II International scientific and practical conference "Distance training of doctors based on video conferencing" pp. 6-11 Naryan-Mar, Nenets Autonomous Okrug, Russian Federation 2016

2. Stolyar V.L. Telemedicine network in the healthcare system of Russian Railways. Medical science and practice. No. 1, 2008. P. 56.

3. Fedorov V.F., Stolyar V.L. Problems of Russian telemedicine and ways to solve

them (brief expert assessment). Physician and Information Technologies, No. 5, 2008, pp. 43-51.

4. Selkov A.I., Stolyar V.L., Atkov O.Yu., Selkova E.A., Chueva N.V. Experience in creating a teleconsultation network in remote regions of Russia and the concept of developing e-diagnostic centers in medical institutions in small towns and villages. - In: International conference Fundamental Space Research Recent development in Geoecology Monitoring of the Black Sea Area and their Prospects. Conference Proceedings/Editor Malina Jordanova. Sunny Beach, Bulgaria, September 22-27, 2008. ISBN 978-954-322-316-9. p.p. 316 - 319.

Resources of the information and telecommunications network "Internet":

1. RUDN ELS and third-party ELS, to which university students have access on the basis of concluded agreements:
- RUDN Electronic Library System - RUDN EBS http://lib.rudn.ru/MegaPro/Web
- ELS "University Library Online" http://www.biblioclub.ru
- ELS "Student Consultant" www.studentlibrary.ru
- EBS "Lan" http://e.lanbook.com/
-Telecommunication educational and information system http://esystem.rudn.ru/
2. Databases and search engines:
- Yandex search engine https://www.yandex.ru/
- Google search engine https://www.google.ru/
- abstract database SCOPUS http://www.elsevierscience.ru/products/scopus/
-WHO documentation center http://whodc.mednet.ru/

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

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

* 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 (GPC-10.) 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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position, department	signature	name and surname

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HEAD OF EDUCATIONAL DEPARTMENT:

Head of the Department Medical informatics and telemedicine		V. Stolyar
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HEAD
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