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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

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

COURSE SYLLABUS

MODERN METHODS OF MEDICAL STATISTICS

(Name discipline/module)

Recommended MSSN For directions training/specialty:

31.05.01 GENERAL MEDICINE

(code And Name directions training/specialty)

Mastering the discipline is carried out within the framework of the implementation of the main professional educational program of higher education (MP HE):

GENERAL MEDICINE

(Name (profile/specialization) MP HE)

1. COURSE GOAL(s)

The discipline “Modern methods of medical statistics” is included in the specialty program “General Medicine” in the direction of 31.05.01 “General Medicine” and is studied in the 11th semester of the 6th year. The discipline is implemented by the Department of Medical Informatics and Telemedicine. The discipline consists of 3 sections and 10 topics and is aimed at studying the main methodological approaches to the analysis of population health and healthcare indicators.

The goal of mastering the discipline is to develop in students an understanding and holistic perception of the concept of evidence in medicine, the clinical and statistical significance of research results, acquiring knowledge about modern information technologies, trends in their development, developing skills in constructing information models, analyzing the results obtained, in pharmacological, medical- biological, experimental and clinical research.

2. REQUIREMENTS FOR THE RESULTS OF MASTERING THE DISCIPLINE

Mastering the discipline “Modern methods of medical statistics” is aimed at developing the following competencies (parts of competencies) in students:

Table 2.1. List of competencies formed in students when mastering the discipline (results of mastering the discipline)

Cipher	Competence	Indicators achievements competencies (within the given disciplines)
OPK- 10	Capable decide standard professional tasks and activities with use of information, bibliographic resources, biomedical terminology, information, and communication technologies With considering main information requirements security	OPK-10.1 Can use modern information and communication tools and technologies in professional activities; OPK-10.2 Can observe rules information security in professional activities
PC- 6	Capable To maintaining. medical documentation and organization of activities located V at the disposal of the secondary medical personnel	PC-6.2 Capable to analyze morbidity, disability and mortality indicators to characterize the health of the attached population;

3. THE PLACE OF DISCIPLINE IN THE STRUCTURE OF MP HE

The discipline “Modern methods of medical statistics” belongs to the elective disciplines of the FTD block of the educational program of higher education.

As part of the educational program of higher education, students also master other disciplines and/or practices that contribute to achieving the planned results of mastering the discipline “Modern Methods of Medical Statistics”.

Table 3.1. List of components of EP HE that contribute to achieving the planned results of mastering the discipline

Cipher	Name of competency	Previous disciplines/modules, practices*	Subsequent disciplines/modules, practices*
OPK- 10	Able to solve standard problems of professional activity using information, bibliographic resources, medical biological terminology, information, and communication technologies, taking into account the basic requirements of information security	Medical Informatics	Telemedicine;
PC- 6	Capable of maintaining medical records and organizing the activities of nursing staff at their disposal	<p>General medical practice: physician assistant in an outpatient clinic; Internship to gain primary professional skills and professional experience: procedural nurse assistant; Obstetrics and gynecology practice: assistant gynecologist; Assistant physician of a therapeutic profile: assistant physician of a general practitioner; Obstetrics and gynecology practice: assistant obstetrician; Surgical practice: assistant surgeon; Introductory practice to obtain primary professional skills: nursing (simulation center); Introductory practice to obtain primary professional skills: nursing; Internship to obtain primary professional skills: assistant to junior medical staff; Public health and healthcare, economics healthcare; Outpatient therapy;</p> <p>Faculty Therapy; Faculty of Surgery; Obstetrics and gynecology; Urology; Infectious diseases; Biostatistics; General surgery; Radiation diagnostics; Ophthalmology; Propaedeutics of internal diseases; Hospital therapy; Hospital surgery, pediatric surgery; Pediatrics; Bioethics**;</p>	<p>Outpatient therapy; Endoscopic urology; Allergology; Hospital therapy; Hospital surgery, pediatric surgery; Telemedicine;</p>

* - is filled in V compliance with matrix competencies and MP HE

** - elective disciplines /practice

4. SCOPE OF DISCIPLINE AND TYPES OF STUDY WORK

General labor intensity disciplines "Modern methods medical statistics" amounts to "1" credit unit.

Table 4.1. Types of academic work by periods of mastering the educational program of higher education for full-time study.

Type of educational work	TOTAL, ac.h.		Semester(s)
			11
Contact Job, ac.h.	34		34
Lectures (LC)	0		0
Laboratory work (LW)	0		0
Practical/seminar classes (SC)	34		34
Independent work of students, ac.h.	2		2
Control (exam/test with assessment), ac.h.	0		0
Total labor intensity of the discipline	ac.h.	36	36
	credit units	1	1

General labor intensity disciplines "Modern methods medical statistics" amounts to "1" credit unit.

Table 4.2. Types of academic work by periods of mastering the educational program of higher education for full-time study.

Type of educational work	TOTAL, ac.h.		Semester(s)
			11
Contact Job, ac.h.	34		34
Lectures (LC)	0		0
Laboratory work (LW)	0		0
Practical/seminar classes (SC)	34		34
Independent work of students, ac.h.	2		2
Control (exam/test with assessment), ac.h.	0		0
Total labor intensity of the discipline	ac.h.	36	36
	credit units	1	1

5. CONTENT OF DISCIPLINE

Table 5.1. Contents of the discipline (module) by type of academic work

Section number	Name discipline section	Content section (Topics)		Type of educational work*
Section 1	Fundamentals of medical and biological research.	1.1	Clinical trial phases.	SC
		1.2	Types of studies, types of documents in clinical studies.	SC
Section 2	Statistics.	2.1	Graphical representation of data.	SC
		2.2	Estimation of distribution parameters.	SC
		2.3	Analysis of qualitative features.	SC
		2.4	Analysis of variance.	SC
		2.5	Survival analysis.	SC
		2.6	Assessing risks and chances.	SC
Section 3	Information Systems.	3.1	Informatization and telemedicine as tools for solving healthcare problems.	SC
		3.2	Laboratory and radiology information systems.	SC

* - is filled in only By **PERSONAL** form training: *LC* – lectures; *LW* – laboratory work; *SC* – seminar classes.

6. MATERIAL AND TECHNICAL SUPPORT OF DISCIPLINE

Table 6.1. Material and technical support of discipline

Audience type	Equipment of an audience	Specialized educational laboratory equipment, software, and materials for mastering the discipline (if necessary)
Seminar	An auditorium for conducting seminar-type classes, group and individual consultations, ongoing monitoring, and intermediate certification, equipped with a set of specialized furniture and technical means for multimedia presentations.	A set of specialized furniture; technical means: multimedia projector Epson EB-965H Monoblock Acer Aspire C24-865, with Internet access. Software: Microsoft products (OS, office application package, including incl. MS Office/ Office 365, Teams, Skype).

Audience type	Equipment audience	Specialized educational/laboratory equipment, software and materials For mastering the discipline (if necessary)
For independent work	An auditorium for independent work by students (can be used for seminars and consultations), equipped with a set of specialized furniture and computers with access to EIOS.	A set of specialized furniture; technical means: multimedia projector Epson EB-965H Monoblock Acer Aspire C24-865, with output to Internet. Software: Microsoft products (OS, office application suite, incl. MS Office/ Office 365, Teams, Skype)

* - the audience for independent work of students is **MANDATORY!**

7. EDUCATIONAL-METHODOLOGICAL AND INFORMATIONAL SUPPORT OF DISCIPLINE

Main literature:

1. Statistical methods of analysis: textbook / E. A. Lukyanova, T.V. Lyapunova, EAT. Shimkevich. - Electronic text data. - Moscow: RUDN University, 2020. - 117 With.: ill.

2. Telemedicine: tasks, technologies, prospects : educational allowance / V.L. Carpenter, M.A. Amcheslavskaya, V.F. Fedorov [And etc.]. - Electronic text data. - Moscow: RUDN, 2020. - 150 p. : ill.

Additional literature:

1. Basics telemedicine : educational allowance / V.L. Carpenter, M.A. Amcheslavskaya, A.I. Antipov [and etc.]. - Moscow : RUDN University, 2017. - 236 With. : ill.

2. Khalafyan A.A., Borovikov V.P., G.V. Kalaidina G.V. Probability theory, mathematical statistics And analysis data. Basics theories And practice on the computer. Statistica. Excel [Text]: more than 150 examples of problem solving: textbook for bachelors specialties non-mathematical directions, studying higher mathematics - economic, legal, information technologies, technical, natural science, humanitarian / - Moscow : URSS cop. 2016. - 317 With. : ill., table; 22 cm.

Resources information and telecommunications networks "Internet":

1. EBS RUDN University And third party EBS, To which students university have access based on concluded agreements

- Electronic library system RUDN University – EBS RUDN University
<http://lib.rudn.ru/MegaPro/Web>

- EBS "University library online" <http://www.biblioclub.ru>

- EBS Juright <http://www.biblio-online.ru>

- EBS "Consultant student" www.studentlibrary.ru

- EBS "Trinity bridge"

2. Bases data And search engines

- electronic fund legal And regulatory and technical documentation
<http://docs.cntd.ru/>

- search engine system Yandex <https://www.yandex.ru/>

- search engine system Google <https://www.google.ru/>

- abstract base data SCOPUS

<http://www.elsevierscience.ru/products/scopus/>

Educational and methodological materials For independent work students at development discipline/module:*

1. Well lectures By discipline "Modern methods medical statistics".

* - all educational and methodological materials for students' independent work are posted in accordance with the current procedure on the discipline page **in TUIS**!

8. ASSESSMENT MATERIALS AND SCORE RATING SYSTEM FOR ASSESSING THE LEVEL OF FORMATION OF COMPETENCIES IN A DISCIPLINE

Evaluation materials and a point rating system* for assessing the level of development of competencies (part of competencies) based on the results of mastering the discipline "Biostatistics" are presented in the Appendix to this Work Program of the discipline.

* - OM and PRS are formed on the basis of the requirements of the relevant local regulatory act of RUDN University

DEVELOPERS:

Assistant professor

Job title, BUP

Signature

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