Federal State Autonomous Educational Institution of Higher Education
PEOPLES' FRIENDSHIP UNIVERSITY OF RUSSIA
RUDN University

Medical Institute

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

COURSE SYLLABUS

Evidence-Based Medicine

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 program ofhigher education:

General Medicine

higher education programme profile/specialisation title

2024

1. THE GOALS OF MASTERING THE DISCIPLINE

The discipline “Evidence-Based Medicine” is included in the specialty program “General Medicine” in the direction of 05/31/01 “General Medicine” and is studied in the 7th semester of the 4th year. The discipline is implemented by the Department of Evidence-Based Medicine. The discipline consists of 4 sections and 10 topics and is aimed at studying the principles of evidence-based medicine, the role of evidence-based medicine in the science and practice of modern healthcare, developing skills in searching for medical information, critically assessing clinical studies, their interpretation, assessing the significance and applicability of their results in practice and for sciences.

The goal of mastering the discipline is to train students in the basic principles of diagnosis, prevention and treatment, as well as improving the prognosis of diseases in a doctor’s practice from the evidence-based medicine

2. REQUIREMENTS to LEARNING OUTCOMES

The mastering of the discipline **«Evidence-Based Medicine»** is aimed at the formation of the following competencies of students:

Table 2.1. The list of competencies formed by students during the development of the discipline (results of the mastering of the discipline)

Competencies	Competency name	Competence achievement indicators
UK-1	Being able to critically analyze problem situations based on a systematic approach and develop an action strategy	UK-1.1. Analyzes scientific and technical literature and regulatory documentation of medical organizations; UK-1.2 Critically evaluates the reliability of information sources, work with conflicting information from different sources; UK-1.3 Understands trends, strategic objectives, problems in the field of healthcare, improve the legislative framework for developing strategies
UK-2	Being able to manage all phases of project management life cycle	UK-2.1 Knows regulations and standards in the field of healthcare;
GPC-10	Being able to solve standard problems in a work field using information, bibliographic resources, medical and biological terminology, information and communication technologies, taking into account the basic requirements of information security	GPC-10.2. Being able to comply with information security rules in a work field
GPC-11	Being able to prepare	GPC-11.1. Being able to prepare scientific, research

	and apply scientific, research and production, design, organizational, management and regulatory documentation in the healthcare system	and production, design, organizational, managerial and regulatory documentation in accordance with the direction of professional activity and the current requirements for their preparation; GPC-11.2. Being able to apply medical terminology, scientific, research and production, design, organizational, managerial and regulatory documentation within the framework of their work field;
PC-2	Being able to examine a patient to establish a diagnosis	PC-2.3 Being able to refer a patient for laboratory examination in case of medical indications 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; PC-2.4 Being able to refer the patient for an instrumental examination if there are medical indications 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;

3. THE COURSE IN THE HIGHER EDUCATION PROGRAMME STRUCTURE

The course «Evidence-Based Medicine» refers to the Compulsory Disciplines of block B1 of the EP HE.

Within the framework of the Educational Program, students also master other disciplines and/or practices that contribute to expected learning outcomes of the course «Evidence-Based Medicine».

Table 3.1. List of Higher Education Program disciplines that contribute to expected learning outcomes

Code of competence	**Name of competence**	**Preceding disciplines**	**Subsequent disciplines**
Professional competences			
UK-2	Being able to manage all phases of project management life cycle	Public health and healthcare, health economics;	Fundamentals of health law;
UK-1	Being able to critically analyze problem situations based on a systematic approach and define the solution	Philosophy; Hygiene; Public health and healthcare, health economics; Mathematics;	Clinical pharmacology;

		Propaedeutics of internal diseases; Chemistry; Medical informatics; Bioorganic chemistry; Physics; History of Medicine; Economy**;	
GPC-10	Being able to solve standard problems in a work field using information, bibliographic resources, medical and biological terminology, information and communication technologies, taking into account the basic requirements of information security	Biostatistics; Medical informatics; Technologies and practice of programming in Python for humanities;	Anesthesiology, intensive care; Telemedicine; Modern methods of medical statistics; Data analysis and visualization; Fundamentals of scientific research work;
GPC-11	Being able to prepare and apply scientific, research and production, design, organizational, management and regulatory documentation in the healthcare system	Public health and healthcare, health economics; Hygiene; Latin language; Anatomy;	Fundamentals of scientific research work, forensic medicine
PC-2	Being able to examine a patient to establish a diagnosis	General surgery; Propaedeutics of internal diseases; Medical enzymology**; Microbiology, virology; Immunology; Molecular genetics in practical biology and medicine**; Radiation diagnostics; Pathophysiology, clinical pathophysiology; Pathological anatomy, clinical pathological anatomy; Medical	Surgical practice: assistant surgeon; Assistant physician of a therapeutic profile: assistant physician of a general practitioner; General medical practice: assistant physician in an outpatient clinic; Obstetrics and gynecology practice: assistant obstetrician; Obstetrics and gynecology practice: assistant gynecologist; General practice: pediatric assistant; Neurology, medical

		elementology;	genetics, neurosurgery; Ophthalmology; Faculty of Surgery; Occupational diseases; Hospital therapy; Endocrinology; Outpatient therapy; Hospital surgery, pediatric surgery; Pediatrics; Obstetrics and gynecology; Anesthesiology, resuscitation, intensive care; Oncology, radiation therapy; Otorhinolaryngology; Reproductive health; Traumatology, orthopedics; Faculty Therapy; Maxillofacial Surgery; General medical skills; Emergency conditions; Urology; Infectious diseases; Psychiatry, medical psychology; Allergology; Phthisiology; Endoscopic urology; Telemedicine; Clinical dentistry; Current issues in neonatology**; Topical Issues of Neonatology**; Cardiology in quests; Molecular genetic methods; Microbiological diagnostic methods; Sectional course;

4. THE DISCIPLINE WORKLOAD AND ACADEMIC ACTIVITIES

The total workload of the discipline «Evidence-Based Medicine» is equal to **2** credits.

Table 4.1. Types of academic activities during the period of the HE program mastering

Type of educational work		Total hours	Semester
			7
Contact classes (total)		36	36
Lectures		0	0
Laboratory work (LW)		36	36
Practical classes		0	0
Independent work (total)		30	30
Control (exam/test)		6	6
Total study load	ac.hrs.	72	72
	ac.cred.	2	2

5. THE COURSE MODULES AND CONTENTS

Table 5.1. The content of the discipline and types of academic activities

Modules	Name of topic	Content of the topics	Type of academic activities
Module 1	The role of evidence-based medicine in modern healthcare.	1.1 The concept of evidence-based medicine: background, history of the development of evidence-based medicine. 1.2 From evidence-based medicine to evidence-based healthcare.	**LW**
Module 2	Research, analysis and summarization of scientific evidence.	2.1 Finding information about medical technologies. Formulation of a question to search for scientific evidence. 2.2 Sources of information on evidence-based medicine. The search for evidence to solve a clinical problem. Stages of the search for an answer.	**LW**
Module 3	Diagnostic tests and screening	3.1 Reliability of the diagnostic test. «The gold standard» and the informativity	**LW**

		of the clinical test. 3.2 Screening theory	
Module 4	Evaluation of various methods of treatment and prevention from the standpoint of evidence-based medicine.	4.1 Basic standards of clinical trials. Principles of Good Clinical Practice (GCP) 4.2 Systematic review is the top of the evidence hierarchy. 4.3 Analysis of the clinical solution. 4.4 Clinical recommendations.	**LW**

6. CLASSROOM EQUIPMENT AND TECHNOLOGY SUPPORT REQUIREMENT

Audience type	Audience equipment	Specialized educational/laboratory equipment, software and materials for mastering the discipline (if necessary)
Laboratory	**An audience for conducting laboratory work, individual consultations, ongoing monitoring and intermediate certification, provided with a set of specialized furniture and equipment.**	**Projector, screen, laptop, system for interactive voting and quiz Turning technologies**
For independent work	**An audience for independent work of students (can be used for seminars and consultations), equipped with a set of specialized furniture and computers with access to EIOS.**	

7. RECOMMENDED SOURSES for COURSE STUDIES

a) Main textbooks:

1. Tricia Greenhalgh: Fundamentals of evidence-based medicine / ed. V.V. Vlasov. 5th ed., revised. and additional - Moscow: GEOTAR-Media, 2022. - 323 p.

2. Clinical pharmacology and pharmacotherapy: textbook / ed. V.G. Kukesa, A.K. Starodubtseva, E.V. Shih. - 4th ed., processed and additional - Moscow: GEOTAR-Media, 2021. - 880 p. https://lib.rudn.ru:443/MegaPro/UserEntry?Action=Link_FindDoc&id=508191&idb=0

b) Additional literature:

1.1. Analysis of data from radiation research methods based on the principles of evidence-based medicine: textbook / A.Yu. Vasiliev, A.Yu. Maly, N.S. Serov. - Electronic text data. - Moscow: GEOTAR-Media, 2008. https://lib.rudn.ru:443/MegaPro/UserEntry?Action=Link_FindDoc&id=508839&idb=0

2.2. Cardiovascular diseases: monograph / V.N. Larina, E.V. Kudina, V.G. Larin [etc.]; edited by V.N. Larina. - Electronic text data. - Moscow: GEOTAR-Media, 2022. - 192 p. https://lib.rudn.ru:443/MegaPro/UserEntry?Action=Link_FindDoc&id=508317&idb=0

3.3. Talantov Petr Valentinovich. Evidence-based medicine: from magic to the search for immortality / P.V. Talents. - Moscow: AST: CORPUS, 2020. - 557 p.

4.4. Fundamentals of evidence-based medicine: A textbook for the system of postgraduate and additional professional medical education/ M.G. Bubnova, E.K. Butina, V.A. Vygodin [and others]. - MOSCOW: Silicea-Poligraf LLC, 2010.-135 p.;

- 5. Heart failure: current issues of diagnosis, treatment and prevention from the standpoint of evidence-based medicine: a textbook for universities / V. N. Larina [et al.]; edited by V. N. Larina. — 2nd ed. - Moscow: Yurayt Publishing House, 2022. - 289 p. - (Higher education). — ISBN 978-5-534-14930-2. — Text: electronic // Educational platform Urayt [website]. — URL: https://urait.ru/bcode/497227

- Evidence-based medicine: textbook / Petrov V.I., Nedogoda S.V. - Moscow: GEOTAR-Media, 2012. - 144 p. https://lib.rudn.ru:443/MegaPro/UserEntry?Action=Link_FindDoc&id=508841&idb=0

Information resources of telecommunications network “Internet”:

1. ELS of RUDN University and third-party ELS, to which university students have access based on concluded agreements

- Electronic library system of RUDN
- ELS RUDN http://lib.rudn.ru/MegaPro/Web
- ELS “University Library Online” http://www.biblioclub.ru
- ELS Urait http://www.biblio-online.ru
- ELS “Student Consultant” www.studentlibrary.ru
- ELS “Trinity Bridge”

2. Databases and search engines

- electronic fund of legal and regulatory technical documentation http://docs.cntd.ru/
- Yandex search engine https://www.yandex.ru/
- Google search engine https://www.google.ru/
- SCOPUS abstract database http://www.elsevierscience.ru/products/scopus/

Educational and methodological materials for students’ independent work when mastering a discipline/module*:

1. A course of lectures on the discipline “Evidence-Based Medicine”.

- 1. Laboratory workshop on the discipline “Evidence-Based Medicine”
- 2. Materials for independent work of students (exemplary clinical guidelines, presentations)

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

8. EVALUATION TOOLKIT AND GRADE SYSTEM FOR ASSESSMENT

Evaluation Toolkit (ET) and a point-rating system (PRS)* for assessment the level of competence formation (part of competencies) based on the results of mastering the discipline «Evidence-based medicine» are presented in the Appendix to this Work Program of the discipline.

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

DEVELOPERS:

Acting HEAD of the Department of Evidence-Based Medicine _____ G.V. Pogosova

HEAD of the Higher Education Program

_____ _____ N.V. Sturov