

Документ подписан простой электронной подписью  
Информация о владельце:  
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Должность: Ректор  
Дата подписания: 07.06.2023 17:43:25  
Уникальный программный ключ:  
ca953a0120d891083f939673078ef1a989dae18a

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

**Institute of Medicine**

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

**COURSE SYLLABUS**

Evidence Based Medicine

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course title

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

31.05.01 General Medicine

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field of studies / speciality code and title

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

General Medicine

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higher education programme profile/specialisation title

2022-2023

## 1. COURSE GOAL(s)

The goal of the course “Evidence-Based Medicine” is to equip students with knowledge of to use approach in medical science and practice, in which the decision to the evaluation and use of preventive, diagnostic and therapeutic measures are taken on the basis of the available evidence of their effectiveness and safety and such evidence are searched, compared, summarized and widely disseminated to patients’ benefit.

## 2. REQUIREMENTS FOR LEARNING OUTCOMES

Mastering the course (module) “Evidence Based Medicine” is aimed at the development of the following competences /competences in part: **Professional Competences- (PC)-5**

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

<b>Competence code</b>	<b>Competence descriptor</b>	<b>Competence formation indicators (within this course)</b>
PC-5	Being able to carry out preventive measures and measures to promote a healthy lifestyle and sanitary and hygiene education among population and monitor their effectiveness	PC-5.1. Being able to organize and conduct medical examinations taking into account age, health status, profession in accordance with applicable legislative acts and other documents.
		PC-5.2. Being able to organize and monitor the immunization of the adult population against infectious diseases 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-5.3. Being able to carry out medical examination of the adult population aimed at early detection of chronic noncommunicable diseases and the main risk factors for their development in accordance with the current legislative acts and other documents.

Competence code	Competence descriptor	Competence formation indicators (within this course)
		PC-5.5. Being able to prescribe preventive measures to patients taking into account risk factors 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-5.6. Being able to monitor observing preventive measures.
		PC-5.11. Being able to assess the effectiveness of preventive patient care.

### 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*
<b>PC-5</b>	Being able to carry out preventive measures and measures to promote a healthy lifestyle and sanitary and hygiene education among population and monitor their effectiveness	Immunology; Hygiene; Ophthalmology; Urology; Organization of special patient care; Neurology, medical genetics, neurosurgery	Hospital therapy; Hospital surgery, pediatric surgery; Outpatient therapy; Clinical Pharmacology; Allergology; Pediatrics

#### 4. COURSE WORKLOAD AND ACADEMIC ACTIVITIES

The total workload of the course “Evidence Based Medicine” 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
			7
Classroom learning , <i>ac.h.</i>		<b>36</b>	<b>36</b>
including:			
Lectures (LC)			
Lab work (LW)			
Seminars (workshops/tutorials) (S)		36	36
<i>Self-studies</i>		36	36
<i>Evaluation and assessment (exam/passing/failing grade)</i>			
<b>Course workload</b>	academic hours_	<b>72</b>	<b>72</b>
	credits	<b>2</b>	<b>2</b>

\* - to be filled in only for **full** -time training; LC - lectures; LW - lab work; S - seminars.

#### 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> An introduction to evidence-based medicine. Evidence levels.	Evidence-based medicine as the main way to improve the quality of medical care to the population. The history of the development of evidence-based medicine.	Seminar Self-studies
	Basic concepts and methods. Objectives of evidence-based medicine, role in the training of a doctor.	Seminar Self-studies
	Levels of evidence (A, B, C) and grades of recommendation (I, IIa, IIb, III). Systematic review. Meta-analysis.	Seminar Self-studies
<b>Module 2</b> Statistics in Evidence-Based Medicine. Analysis of publications from the	Basic statistical knowledge required to interpret evidence-based medicine data.	Seminar Self-studies
	Graphic presentation of statistical data.	Seminar

<b>Course module title</b>	<b>Course module contents (topics)</b>	<b>Academic activities types</b>
standpoint of evidence-based medicine.		Self-studies
	Sources of professional information.	Seminar Self-studies
	Analysis of publications from the standpoint of evidence-based medicine. Conflict of interest.	Seminar Self-studies
<b>Module 3</b> Pharmacoepidemiology. Pharmacoeconomics.	Definition. Types of pharmacoepidemiological studies	Seminar Self-studies
	Basic methods of pharmacoepidemiological analysis and modeling.	Seminar Self-studies
	Analysis of drug consumption.	Seminar Self-studies
<b>Module 4</b> Clinical research. Formular system. Adverse drug reactions.	Clinical trials of medicines: phases, GCP, ethical and legal norms.	Seminar Self-studies
	Formular system: principles of construction, methods of choosing medicines. The system for the rational use of medicines in Russia.	Seminar Self-studies
	Classification of ADR. Monitoring methods. Pharmacovigilance.	Seminar Self-studies
<b>Module 5</b> Application of the principles and methods of evidence-based medicine in the health care system.	Uniform standards for the presentation of the results of randomized controlled trials.	Seminar Self-studies
	The concept of GLP.	Seminar Self-studies
	Development and implementation of clinical guidelines, standards and protocols.	Seminar Self-studies
	Clinical thinking and logic of diagnosis, specific patient management tactics in the era of evidence-based medicine.	Seminar Self-studies

## 6. CLASSROOM EQUIPMENT AND TECHNOLOGY SUPPORT REQUIREMENTS

*Table 6.1. Classroom equipment and technology support requirements*

<b>Type of academic activities</b>	<b>Classroom equipment</b>	<b>Specialised educational / laboratory equipment, software, and materials for course study (if necessary)</b>
Seminar	Modern computer and multimedia equipment with the necessary list of system and office software, Internet connection	

## 7. RESOURCES RECOMMENDED FOR COURSE STUDY

### *Main readings:*

- Basics of Evidence-Based Medicine: A textbook for the system of postgraduate and additional professional education of doctors / MG Bubnova, EK Butina, VA Vygodin [and others]. - MOSCOW: LLC «Silicea-Polygraph», 2010. - 135 p.;
- Petrov, V.I. Medicine based on evidence: a textbook for students of medical universities and postgraduate education of doctors / V.I. Petrov, S.V. Nedogoda; V.I. Petrov, S.V. Nedogoda. - Moscow: GEOTAR-Media, 2009. - 141p.
- Grinhalkh, T. Basics of evidence-based medicine: translation from English / T. Grinhalkh; ed. I.N. Denisova, K.I. Saitkulova. - 3rd ed. - Moscow: GEOTAR-Media, 2009. - 282p.;
- Henegan, K. Evidence-based medicine / K. Henegan; Karl Henegan, Douglas Badenoch; per. from English ed. V.I. Petrov. - Moscow: GEOTAR-Media, 2011. - 125 p. - (Pocket Guide);

### *Additional readings:*

#### *Electronic full-text materials:*

- Petrov, V.I. Medicine based on evidence: a textbook / V.I. Petrov, S.V. Nedogoda. - Moscow: Limited Liability Company Publishing Group «GEOTAR-Media», 2012. - 144 p.;
- Evidence-based medicine: a textbook for students of medical universities / IP Artyukhov, A.V. Shulmin, V. V. Kozlov [and others]. - Krasnoyarsk: Krasnoyarsk State Medical University named after Professor V.F. Voino-Yasenetsky, 2012. - 206 p.;
- General epidemiology with the basics of evidence-based medicine: a guide to practical exercises / Edited by V.I. Pokrovsky, N.I. Bricaud. - 2nd edition, revised and enlarged. - Moscow, 2012. - 496 p.;
- Evidence-based medicine: how to practice EBM. How to Teach EBM / Sharon E. Straus, W. Scott Richardson, Paul Glaceio, R. Brian Haynes; transl. from English ed. V.V. Vlasova, K.I. Saitkulova. - Moscow: Publishing group «GEOTAR-Media», 2010. - 309 p.;
- Moiseev, V.S. Internal diseases with the basics of evidence-based medicine and clinical pharmacology: a guide for doctors / V.S. Moiseev; V.S. Moiseev, J.D. Kobaleva, S.V. Moiseev; ed. V.S. Moiseeva. - Moscow: GEOTAR-Media, 2010. - 832 p.;
- Vorobyova, N.A. Evidence-based medicine in modern clinical practice: achievements and problems: a tutorial / N.A. Vorobyova, A.A. Schapkov. - Arkhangelsk: Northern State Medical University, 2020. - 167 p.;
- Basics of evidence-based medicine: Study guide / MP Khokhlov, AB Peskov, IR Kerova [and others]; Ulyanovsk State University. - Ulyanovsk: Ulyanovsk State University, 2020. - 52 p.;
- Naumova, E.A. Introduction to evidence-based medicine: a textbook / E.A. Naumova, Yu.G. Schwartz, O.N. Semenova. - Moscow: Publishing House «Academy of Natural Sciences», 2019. - 76 p.;

– Topical issues of evidence-based medicine: a practical guide for doctors / Ministry of Health and Social Development of the Samara Region, Samara State Med. un-ty, Samara regional medical information and analytical center; [comp. L. V. Kveder]. - Samara: SSMU, 2012. - 117 p.;

– Bashchinsky, S.E. Development of clinical practice guidelines from the standpoint of evidence-based medicine: textbook. manual for doctors and healthcare organizers / S.Ye. Bashchinsky; S.E. Bashchinsky; Centr. SciRes Inst. Of Healthcare Management of Ministry of healthcare of Russia, Interregional Public Organization «Society of Evidence-Based Medicine Specialists». - Moscow: Publishing house Media Sphere, 2004. - 135 p.

### *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 “Evidence Based Medicine”

\* 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 (**PC-5**) 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:**

Associate Professor of the  
Department of Evidence-Based  
Medicine

Yu.V. Vykhristyuk

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_____ position, department	_____ signature	_____ name and surname
Associate Professor of the Department of H Evidence- Based Medicine		E.E. Petryaykina
_____ position, department	_____ signature	_____ name and surname

**HEAD OF EDUCATIONAL DEPARTMENT:**  
of Evidence-Based Medicine

_____ name of the department	_____ signature	_____ name and surname
		I.E. Koltunov

**HEAD  
OF HIGHER EDUCATION PROGRAMME:**

First Deputy Director of MI for Academic Affairs		Iv.V.Radysh
_____ position, department	_____ signature	_____ name and surname