ЛД-21 ИН

Federal State Budgetary Educational Institution higher education
"NORTH-OSSETIAN STATE MEDICAL ACADEMY"
Ministry of Health of the Russian Federation

ДОКУМЕНТ ПОДПИСАН
ЭЛЕКТРОННОЙ ПОДПИСЬЮ

Сертификат: 2D4EFF8215A48D63793F851FADB089F4
Владелец: Ремизов Олег Валерьевич
Действителен: с 23.05.2023 до 15.08.2024

APPROVED
Rector
O.V.Remizov
May 24, 2023

WORKING PROGRAMM OF EDUCATUANAL DISCIPLINE

MEDICAL INFORMATICS

the main professional educational program of higher education –
the specialty program in the specialty **31.05.01 Medical care**,
approved on 24.05.2023

Form of education **Full-time**

Term of training **6 years**

Department **Chemistry and physics**

Vladikavkaz 2023y

When developing a discipline program, the program includes:

1. Federal State Education Standard on specialty **05.31.01 Medical case** approved by the Ministry of Education and Science of the Russian of Federation of August 12, 2020 y, No988
2. The curriculum in the specialty **05.31.01 Medical case**,

ЛД-21-01-21 ИН

ЛД-21-02-22 ИН

ЛД-21-03-23 ИН

approved by the academic council of FSBEI HE NOSMA of the Ministry of Health of Russian on May 24, 2023 y. Protocol No8

The work program of the discipline **"Medical Informatics",** approved at a meeting of the Department of Chemistry and Physics of May 22, 2023y. Protocol No9

The work program of the discipline was approved at a meeting of the central coordinating education-methodical council of May 23, 2023y. Protocol No5

The work program of the discipline was approved by the Scientific Council of the FSBEI HE NOSMA of the Ministry of Health of Russian on May 24, 2023y. Protocol No8

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Contents of the work program

1. the name of the discipline;
2. list of planned results of training in the discipline, correlated with the planned results of the development of the educational program;
3. ndication of the place of the discipline in the structure of the educational program;
4. The amount of discipline in credit units, indicating the number of academic or astronomical hours allocated to the contact work of students with the teacher (by types of training sessions) and to the independent work of students;
5. content of the discipline, structured according to topics (sections) indicating the number of academic or astronomical hours assigned to them and types of training sessions;
6. list of educational and methodological support for independent work of students on discipline
7. An evaluation materials of tools for conducting intermediate certification of trainees in discipline;
8. List of basic and additional educational literature necessary for mastering the discipline;
9. list of resources of the information and telecommunication network "Internet" (hereinafter referred to as the "Internet" network), necessary for mastering the discipline;
10. methodical instructions for students to learn the discipline;
11. List of information technologies used in the implementation of the educational process for discipline, including a list of software and information reference systems (if necessary);
12. A description of the material and technical base necessary for the implementation of the educational process for discipline.
13. Conducting educational activities using e-learning and distance learning technologies.

2 List of planned learning outcomes for the discipline and the results of mastering the educational program

п/п №	Room/ index compete the	Content of the competence (or part of it)	Name of section disciplines	Indicators of competence achievement	Results of development		
					be able to	be able to	**владеть**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
1.	**GPC-10**	The ability to understand the principles of work of modern information technologies and use them to solve the problems of professional activity	The concept of information. General characteristics of the processes of data collection, transmission, processing and accumulation. Methods and means of informatization in medicine and public health.	**IA-1 GPC-10** Be able to use modern methods of collecting and processing information.	theoretical bases of computer science, collection, storage, search, processing, transformation, use of information computer systems in medicine and public health; mathematical methods for solving intellectual problems and their application in medicine	to use educational, scientific, scientifically popular literature, the Internet for professional activities; make calculations based on the results of the experiment	basic information transformation technologies: graphical, text, table editors, search on the Internet.
2.	**GPC-10**	The ability to understand the principles of modern information technologies and use them to solve the problems of professional activity	The concept of information. General characteristics of the processes of data collection, transmission, processing and	**IA-1 GPC-10** Be able to use modern methods of collecting and processing information..	theoretical bases of computer science, collection, storage, search, processing, transformation, use of	to use educational, scientific, scientifically popular literature, the Internet for professional activities; make calculations	basic information transformation technologies: graphical, text, table editors, search on the Internet.

			accumulation. Methods and means of informatization in medicine and public health.		information computer systems in medicine and public health; mathematical methods for solving intellectual problems and their application in medicine	based on the results of the experiment,	
3.	**GPC-10**	The ability to understand the principles of modern information technologies and use them to solve the problems of professional activity	Telecommunication technologies and Internet resources in medicine.	**IA-1 GPC-10** Be able to use modern information and communication tools and technologies	theoretical foundations of telecommunication networks	to use educational, scientific, popular scientific literature, the Internet for professional activities	Technologies of search, selection, data filtration in the Internet
4.	**GPC-10**	The ability to understand the principles of modern information technologies and use them to solve the problems of professional activity	Basic information conversion technologies	**IA-1 GPC-10** Be able to use modern information and communication tools and technologies	theoretical bases of computer science, collection, storage, search, processing, transformation, use of information computer systems in medicine and public health; mathematical methods for solving	to use educational, scientific, scientifically popular literature,	basic information transformation technologies: graphical, text, table editors, Internet search

					intellectual problems and their application in medicine;		
5.	**UC – 1**	The ability to carry out a critical analysis of problem situations based on a systematic approach, to develop an action strategy	. Modeling of physiological, morphological, molecular-genetic and biochemical processes	**IA-1 UC - 1** Be able to formulate the goal, objectives of the project and make a schedule for its implementation.ь таты	Fundamentals and methods of modeling	Use abstract modeling techniques	DATA BASE CONTROL SYSTEM Access, 1C. Polyclinic
6.	**GPC-10**	The ability to understand the principles of modern information technologies and use them to solve the problems of professional activity	Information systems of treatment-and-prophylactic establishments	**IA-1 GPC-10** Be able to formulate the goal, objectives of the project and make a schedule for its implementation.	Methods and means of processing large volumes of medical information processing	Use of information computer systems in medicine and public health;	DATA BASE CONTROL SYSTEM Access, 1C. Polyclinic
7.	**GPC-10**	The ability to understand the principles of modern information technologies and use them to solve the problems of professional activity	Information support of the medical-diagnostic process.	**IA-1 GPC-10** Be able to formulate the goal, objectives of the project and make a schedule for its implementation.	Methods and means of processing large volumes of medical information processing	use of information computer systems in medicine and public health;	DATA BASE CONTROL SYSTEM Access, 1C. Polyclinic
8.	**GPC-10**	The ability to understand the principles of modern information technologies and use them to solve the problems of professional activity	Medical and technological systems of control and management of body functions ..	**IA-1 GPC-10** Be able to formulate the goal, objectives of the project and make a schedule for its	Methods and means of processing large volumes of medical information processing	use of information computer systems in medicine and public health;	DATA BASE CONTROL SYSTEM Access, 1C. Polyclinic

				implementation.			
9.	**GPC-10**	The ability to understand the principles of modern information technologies and use them to solve the problems of professional activity	Automated medical and technological systems of clinical and laboratory research and functional diagnostics.	**IA-1 GPC-10** Be able to formulate the goal, objectives of the project and make a schedule for its implementation.	Methods and means of processing large volumes of medical information processing	use of information computer systems in medicine and public health;	DATA BASE CONTROL SYSTEM Access, 1C. Polyclinic
10.	**GPC-10**	The ability to understand the principles of modern information technologies and use them to solve the problems of professional activity	Information systems in health management of territorial and federal levels	**IA-1 GPC-10** Be able to formulate the goal, objectives of the project and make a schedule for its implementation..	Methods and means of processing large volumes of medical information processing	use of information computer systems in medicine and public health;	DATA BASE CONTROL SYSTEM Access, 1C. Polyclinic
11.	**GPC-10**	The ability to understand the principles of modern information technologies and use them to solve the problems of professional activity	Information systems in health management of territorial and federal levels	**IA-1 GPC-10** Be able to formulate the goal, objectives of the project and make a schedule for its implementation.	Methods and means of processing large volumes of medical information processing	use of information computer systems in medicine and public health;	DATA BASE CONTROL SYSTEM Access, 1C. Polyclinic

3. The place of discipline in the structure of the educational program

The discipline "Medical Informatics" refers to required part of the Block 1 of the Federal State Educational Standard of Higher Education in the specialty of Medicine.

4. The scope of the academic discipline and types of academic work

Type of educational work		Total hours / credits units	Semesters
			I
Classroom activities (total)		26	26
Including:			
Lectures (L)		6	6
Practical training (PT)		20	20
Seminars (C)			
Laboratory work (LW)			
Independent work of the student (IWS), including		46	46
Medical history (IH)			
Coursework (CW)			
Abstract (Abs)		8	8
Calculation and graphic work (RGW)			
Preparation for classes (PC)		12	12
Preparing for routine monitoring (PRM)		8	8
Preparation for Interim Control (PIC)		8	8
Other types of independent work			
Type of intermediate appraisal	set-off (S)		(S)
	exam (E)		
TOTAL: Total labor intensity (units)	72	72	72
	2,0	2,0	2,0

5. Content of the discipline

п/п №	**№ Semestra**	Name of the section disciplines	**Types of educational activities, including independent work of students (in hours)**					**Forms of ongoing monitoring of academic performance (for the week of the semester)**
			L	**LW**	**PT**	**IWS**	**всего**	
1	2	3	4	5	6	7	8	9
1.	I	The concept of information. General characteristics of the processes of data collection, transmission, processing and accumulation. Methods and means of informatization in medicine and public health.	1		1	4	6	OS
2.	I	Telecommunication technologies and Internet resources in medicine.	0,5		1	6	7,5	OS,T,WS
3.	I	Basic information conversion technologies.	0,5		1	6	7,5	OS,T,WS, M
4.	I	Modeling of physiological, morphological, molecular-genetic and biochemical processes.	0,5		1	8	9,5	OS,T,WS, M
5.	I	Information systems of treatment-and-prophylactic establishments.	0,5		2	7	9,5	OS,T,WS
6.	I	Information support of the medical-diagnostic process.	1		4	6	11	OS,T,WS, M
7.	I	Medical and technological systems of control and management of body functions ..	1		1	3	5	OS,T,WS
8.	I	Automated medical and technological systems of clinical and laboratory research and functional diagnostics	0,5		5	3	8,5	OS,T,WS
9.	I	Information systems in health management of territorial and federal levels.	0.5		4	3	7,5	OS,T,WS
		TOTAL:	**6**		**20**	**46**	**72**	

6. List of educational and methodological support for independent work of students in discipline

№/п	№ semester	Name of the teaching methodical development
1.	I	Babenko A. V. "Standard software. Microsoft Word text editor. Creating, formatting and saving a document, for solving medical problems »
2.	I	Babenko A.V. "Standard software. Microsoft Word text editor. Tables, Formulas, page breaks for solving medical problems »
3.	I	Ба Benko A.V. "Standard software. Using Microsoft Excel to solve medical problems: program interface, rows, columns, creating a list »
4.	I	Babenko A.V. "Standard software. Microsoft Excel. Use of built-in statistical functions to solve medical problems »
5.	I	Babenko A.V. "MS Access. Database organization: by entering data; with the help of a wizard; using the constructor, by importing spreadsheet data; creating a multi-table database for solving medical problems "
6.	I	Babenko A.V. "Standard software. Presentations in the MS Power Point environment. Interface, the main elements and possibilities for solving medical problems »
7.	I	Babenko A.V. "The means of the Internet for searching professional information on certain sections of medical knowledge. Search engines"
8.	I	Babenko A.V. "The means of the Internet for searching professional information on certain sections of medical knowledge. Library Information Systems »
9.	I	Babenko A.V. "Algorithm for modeling physiological processes. Information management systems of medical-prophylactic institution (AIS) »
10.	I	Babenko A.V. "The automated workstation (AWP) of the physician of the treatment department is the main functions and principles of work"
11.	I	Babenko A.V. "Principles of constructing specialized information and technological systems for the separation of a hospital using the example of an automated information system for the intensive care unit"
12.	I	Babenko A.V. "Information medical systems of diagnostic services (departments of functional diagnostics and laboratory research)
13.	I	Babenko A.V. "ARM physician functional diagnostics and doctor-laboratory assistant - the main functions and principles of work"
14.	I	Babenko A.V. "Information systems for health management at the territorial level"
15.	I	Babenko A.V. Karkusty N.K. Sbornik metodicheskiy rekomendatsii «1S: Meditsina. Poliklinika »

7. The Evaluation materials of Means for the Intermediate Certification of Students in Discipline

№/п	List of competences	№ semester	Indicator assessments	Evaluation Criteria	Scale of assessment	Name EM
1	**2**	**3**	**4**	**5**	**6**	**7**
1	GPC-10, UC – 1	I	See standard for quality assessment of education , approved by order FSBEE HE NOSMA Ministry of Health of RF 10.07.2018y., №264/o	see the standard for assessing the quality of education , approved by order FSBEE HE NOSMA Ministry of Health of RF 10.07.2018y. , №264/o	see the standard for assessing the quality of education , approved by order FSBEE HE NOSMA Ministry of Health of RF 10.07.2018y ., №264/o	Tickets to offset; Test tasks.

8. The list of basic and additional educational literature necessary for mastering the discipline

п/п №	NAME	Author **(S)**	Year, place publications	Number of copies	
				in library	at the department
1	**2**	**3**	**4**	**5**	**6**
main literature					
1.	Medical Informatics	Chernov VI and etc	Rostov n / D, Phoenix, 2007.	100	5
2.	Information systems in healthcare	Sabanov VI, Golubev AN, Komina ER	Rostov n / D, Phoenix, 2007.	71	5
3.	Fundamentals of practical computer science in medicine	Chernov VI, Esaulenko VI, Semenov SN	Rostov n / D, Phoenix, 2007.	101	5
4.	Medical Statistics	Zhizhin K.S.	Rostov n / D, Phoenix, 2007..	100	5
additional literature					
5.	Computer science. Practical course for students of medical schools	Arunyants GG, Stolbovsky DN, Kalinkin A.Yu.	Vladikavkaz, Olympus, 2005.	196	5
6.	Information systems and technologies in medicine and public health services	Ed. Arunyants G.G..	Vladikavkaz, Olympus, 2001.	222	5
7.	Fundamentals of work in the INTERNET network	Arunyants GG, Stolbovsky DN, Kalinkin A.Yu.	Vladikavkaz, Olympus, 2001.	207	5
8.	Medical Statistics	Gerasimov A.N.	M., MIA, 2007	7	5

№ п/п	Наименование	Автор (ы)	Год, место издания	Кол-во экземпляров		Наименование ЭБС/ссылка ЭБС
				в библиотеке	на кафедре	
1	2	3	4	5	6	7
Основная литература						
1.	Медицинская информатика	Чернов В.И. и др.	Ростов н/Д, Феникс, 2007.	100	5	
2.	Информационные системы в здравоохранении	Сабанов В.И., Голубев А.Н., Комина Е.Р.	Ростов н/Д, Феникс, 2007.	71	5	
3.	Основы практической информатики в медицине	Чернов В.И., Есауленко В.И., Семенов С.Н.	Ростов н/Д, Феникс, 2007.	101	5	
4.	Медицинская статистика	Жижин К.С.	Ростов н/Д, Феникс, 2007.	100	5	
5,	Медицинская информатика Учебник	В.П. Омельченко., АЮАЮ Демидова	М:ГЭОТАР-Медиа, 2016			«Консультант студента» http://www.studmedlib.ru/ru/book/ISBN9785970436455.html
Дополнительная литература						
1.	Информатика. Практический курс для студентов медицинских вузов	Арунянц Г.Г., Столбовский Д.Н., Калинкин А.Ю.	Владикавказ, Олимп, 2005.	196	5	
2.	Информационные системы и технологии в медицине и здравоохранении	под ред. Арунянца Г.Г.	Владикавказ, Олимп, 2001.	222	5	
3.	Основы работы в сети INTERNET	Арунянц Г.Г., Столбовский Д.Н., Калинкин А.Ю.	Владикавказ, Олимп, 2001.	207	5	
4.	Медицинская статистика	Герасимов А.Н	М..МИА 2007	7	5	
5.	Медицинская информатика Учебник	Ред Т.В. Зарубиной Б.А. Кобринского	М:ГЭОТАР Медиа, 2016			«Консультант студента» http://studmedlib.ru/ru/book/ISBN9785970436899.html

СОГЛАСОВАНО
Зав. библиотекой

9. The list of resources of the information and telecommunication network "Internet", necessary for mastering the discipline

1. "Student consultant"
2. *www.spsl.nsc.ru/win/navigatrn.html*

"Navigator on Information and Library Resources of the Internet" on the site of the GPTNB of the Siberian Branch of the Russian Academy of Sciences. It is a common resource that integrates links to other libraries.

3. *it2med.ru/mir.html*

"WORLD - Medical Internet Resources" on the website of "MedInformConsulting" (Moscow). It is a specialized resource that integrates links to medical libraries and other medical resources.

4. *www.scsml.rssi.ru/*

Central Scientific Medical Library (TsNMB) IM Sechenov), the database "Russian medicine" - contains information on the primary sources, received in the CNMB after 1988 in the sections

- Articles - include articles from domestic journals and collections;
- dissertations - include domestic abstracts and dissertations;
- books - include domestic, translated and foreign books.

This database contains only bibliographic descriptions of the primary sources available in the CNMB, and practically does not contain abstracts and texts of the documents themselves. Subscribers can order paper and electronic copies of articles and abstracts. ЦНМб does not make full copies of books and dissertations, and also electronic text copies of primary sources.

5. *www.webmedinfo.ru/index.php*

WEBmedINFO.RU - books (for many medical specialties), software, reference books, atlases, tests, abstracts, medical history (www.webmedinfo.ru/referat/), articles, drug search in pharmacies of different cities

6. *medlib.ws/*

Medlib.ws — a new project (opened August 1, 2008), offering books and articles on many medical specialties, traditional medicine and a healthy lifestyle. In addition, the site hosts electronic reference books, tests and video materials

7. *ucm.sibtechcenter.ru/*

The Consolidated Catalog of Periodicals and Analytics on Medicine "- has been implemented since March 2003 and unites 12 medical libraries of Russia of various departmental affiliations. The main goal of the project is the creation of a consolidated catalog of periodicals and analytical lists on medicine. As a linguistic resource, the MeSH thesaurus and the "Russian Medicines" database act.

8. *www.kuban.su/medicine/shtm/00.htm*

The medical library on the site kuban.su offers articles, books on various medical specialties (cardiology, gastroenterology, neurology, nephrology, ophthalmology, gerontology, pulmonology, endocrinology, reproduction, osteoarthritis, emergency care), materials on the use of medications, links to medical sites and several normative documents

9. www.neuro.net.ru/bibliot/

The library NEVRONET offers literature for specialists and patients in the field of neurology, psychiatry and related specialties. Contains a compilation of materials on epilepsy, dictionaries, reference books and encyclopedias (EEG terminology dictionary, semiotics of children's diseases, Harrison's directory on internal diseases, Big Medical Encyclopedia, Big Encyclopedia of Massage, Oxford Medical Dictionary).

10 *lib.ru/NTL/MED/*

Section "Medicine" of the project "LIB.RU - Maxim Moshkov's Library", contains reference materials and manuals on some medical issues (physical therapy, homeopathy, vision improvement, overweight, alternative medicine, surgery, theory of aging)

11 *www.medtext.ru/pafiledb/index.php*

The project "MedTEXT" - contains in the archived form educational materials on many medical specialties, articles, medical history, abstracts, software (including MS-DOS).

12 *www.medliter.ru/?page=buy*

A paid resource "Medical literature". Payment can be made by sending an SMS message or through any electronic payment system.

14. it-medical.ru/index.php?option=com_mtree&Itemid=33

The electronic medical library IT Medical, allowing to view materials on some medical specialties (anatomy, anesthesiology, medical law, patanatomy, resuscitation, therapy, pharmacy, surgery).

15. www.infarktu.net/

The InfarctuNet project provides specialists with texts on IHD (myocardial infarction, acute coronary syndrome, stable and unstable angina pectoris), thrombolytic therapy, atherosclerosis, arterial hypertension, heart failure and arrhythmia

16. www.rusanesth.com/

Russian anesthesia server is a specialized resource offering articles on: regional anesthesia and pain management, general anesthesia problems, new intensive care, anesthesia drugs, practical aspects of anesthesiology, obstetric anesthesiology.

17. www.galark.ru/arhiv/index.html

The site library "Anesthesiology and Implantology in Dentistry" contains a selection of articles for patients and doctors. This section also contains some programs for doctors

18. reanclub.info/publ/

Project "Reanimation Club", is intended for professional and social communication of specialists related to intensive care, reanimatology, anesthesiology. Contains a specialized collection of articles and books, medical software

19. www.disser.ru/library.htm

Section "Library" of the site "Doctor-graduate student", contains archived texts of articles from the scientific and practical journal "Doctor-graduate student", articles on philosophy, on the use of statistics and computer technology, on general issues, useful postgraduate students

20. surgerylib.ru/index.html

Electronic library SURGERYLIB.RU on surgery. Contains an archive of X-ray and CT images, photo and video materials, articles, e-books, manuals, abstracts, dissertations

20 *www.photomedicine.ru/rus/knowlbase/downloads/*

Medical library in the project "SOF - Club of specialists in the field of photomedicine". Contains articles on photomedicine, photo and video materials

21 *www.medtrust.ru/pls/biblioteka/index.html*

Section "Medical library" of the project "MedTRast". Contains an encyclopedia of clinical examination of the patient, an archive of medical records, an encyclopedia of laboratory tests, materials on dietology, reference books (including pharmacological) and materials from some periodical medical journals.

22 *www.medicbuzz.net/biblioteka/index.ph*

Medical Library of the portal "Modern Medicine". Contains books on various branches of medicine.

23 *www.gastroportal.ru/*

Library of the project "Gastroenterological portal of Russia". Contains specialized articles, books, reference books, methodological recommendations, image collections, abstracts of scientific publications 2000-2005.

24 *www.elsevier.ru/products/electronic/medical/*

Elsevier publishes electronic databases, including the MD Consult clinical knowledge system and online resources for junior medical personnel (e-skills library, electronic guidance on intensive care and emergency treatment procedures, etc.).

25 *www.vsma.ac.ru/~lib/medlib/index.htm*

The electronic medical library of the publishing house "Praktika", offers the texts of all the books of the series "Foreign Practical Guidelines on Medicine", prepared in 1997-2000, allows you to view materials on some medical specialties in your own interface (therapy, cardiology,

neurology, pediatrics, surgery, psychiatry, obstetrics, endocrinology, immunology, pharmacology). Has a query language for complex searches

26 *revolution.allbest.ru/medicine/*

Section "Medicine" of the Allbest.ru project is a collection of medical essays.

27 *www.medsite.net.ru/*

The Medsite project is a collection of case histories in many specialties.

28 *makvlad.narod.ru/emergency/history.html*

Case histories on the project "Makvlad's site".

29 *www.sudmed.ru/index.php?showforum=11*

Specialized forensic medical library of the project "FSM - forum of forensic doctors". Contains the author's abstracts of dissertations, abstracts and books on forensic medicine.

30 *www.medstatistica.com/articles.html*

"Statistics in biomedical research." Articles and books on the application of statistics in medical and biological research. There is a paid section of materials for dissertations.

LIBRARIES OF HIGHER MEDICAL EDUCATIONAL INSTITUTIONS

1. *medlib.tomsk.ru/node/3*

Scientific Medical Library of the Siberian State Medical University.

2. *www.pgpb.ru/libraries/lib_vgmu/library.htm*

Scientific Library of Vladivostok State Medical University.

3. *www.vsma.ac.ru/~lib /*

Joint Scientific Medical Library of Voronezh State Medical Academy named after. N. N. Burdenko

4. *www.igma.ru/content/view/270/260/*

Library of the Izhevsk State Medical Academy.

5. *www.kgmu.kcn.ru/page.php?parm=division/library/resurs.html*

Library of Kazan State Medical University

6. *www.gma.nnov.ru/NGMA/Lib/dates.php*

Library of the Nizhny Novgorod State Medical Academy

7. omsk-osma.ru/rest_14.html

Library of the Omsk State Medical Academy.

8. library.sgmu.ru/cgi-bin/irbis64r_71/cgiirbis_64.exe?C21COM=F&I21DBN=IBIS&P21DBN=IBIS

Scientific Library of the Saratov State Medical University.

9. www.yma.ac.ru/bibl.htm#4

Library of the Yaroslavl State Medical Academy.

HANDBOOK AND CATALOG OF MEDICINAL DRUGS

1. www.vidal.ru/po_piskreparatov/

Reference book of medicinal preparations VIDAL. Provides a search for drugs on the clinical and pharmacological index, nosological index, anatomically-therapeutically-chemical (ATC) classification system. It contains descriptions of the drugs themselves and their interactions, information for physicians of various specialties on the use of medicines, algorithms for diagnosis and management of patients, recommendations and results of clinical trials.

2. www.rlsnet.ru/tematicheskie_statji.html

Library of the site "Encyclopedia of medicines - radar station". It contains an encyclopedia of medicines, which includes sections: the reference book of medicines, active substances, dosage forms, the directory of illnesses, pharmacological groups, ATX-classification, pharmacological action, manufacturers of medicines. There are books, normative acts and thematic articles on the problems of pharmacotherapy.

3. medi.ru/

4. The MEDI.RU project contains instructions and articles on the use of drugs, has thematic sections on various medical specialties, a preferential list of medicines (DLO).

5. www.lib-med.ru/

Lib-Med — library of instructions for medicines on the unofficial site of the Department of General Practitioners and Anesthesiology of the Moscow State Medical University.

6. www.library2.ru/

The project Library2.ru contains a collection of instructions for medicines and preventive remedies, a dictionary of medical terms

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10. Methodical instructions for students to learn the discipline

Training consists of contact work (78 hours) and independent work (30hours). In the discipline, the following educational technologies are used.

Lecture course: lectures accompanied by video materials (slide presentations, demo versions of information medical systems).

Practical exercises: designed for individual work of students with a computer, provide for the solution of situational problems using standard software applications and fragments of special software tools - operating medical information systems (computer simulations of the medical-diagnostic process).

The proportion of sessions conducted in interactive forms is at least 46% of classroom activities.

Independent work with literature and the writing of abstracts form the ability to analyze medical and social problems, the ability to use natural-scientific, medical-biological and clinical information in practice in various types of professional and social activities.

Each student is provided with access to the library funds of the academy and the department.

For each section of the academic discipline, methodical recommendations for students and guidelines for teachers.

Students' learning activities, including independent work with literature and specialized software products, contribute to the mastery of the culture of thinking, the ability in written and oral speech to logically correctly formalize its results; the formation of a systematic approach to the analysis of medical information, the perception of innovation.

11. List of information technologies used in the implementation of the educational process in discipline

PowerPoint
Microsoft Office
Internet Explorer
TTESTER
1C:Медицина. Поликлиника
MindMap

12. Description of the material and technical base necessary for the implementation of the educational process in discipline

Lecture auditoriums with a projector and two equipped computer classrooms for students to carry out the research and development work provided for in the workshop and equipped with a local network and access to the Internet; means for implementing multimedia demonstrations (multimedia projector, laptop, screen, projector, speakers)

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13. Conducting educational activities using e-learning and distance learning technologies.

In the context of the introduction of restrictive measures (quarantine) associated with an unfavorable epidemiological situation, the threat of the spread of a new coronavirus infection and other force majeure events that do not allow full-time training, it is possible to study this discipline or part of it using e-learning and distance educational technologies.

Teaching the discipline in the above situations will be carried out through the development of an electronic course with access to video lectures and interactive course

materials: presentations, articles, additional materials, tests and various tasks. When conducting training sessions, monitoring progress, as well as intermediate certification of students, platforms of the electronic information and educational environment of the academy and / or other e-learning systems recommended for use in the academy, such as Moodle, Zoom, Webinar, etc., can be used.

Lectures can be presented in the form of audio, video, "live lectures", etc. Conducting seminars and practical classes is possible on-line in both synchronous and asynchronous modes. Seminars can be conducted in the form of web conferences.