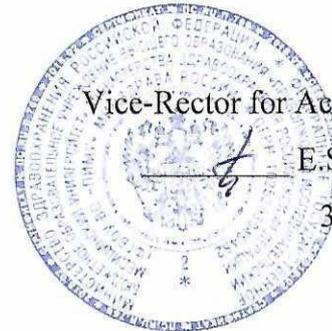


Federal State Budgetary Educational Institution of Higher Education
"Privolzhsky Research Medical University"
Ministry of Health of the Russian Federation



APPROVED

Vice-Rector for Academic Affairs

E.S. Bogomolova

31 August 2021

WORKING PROGRAM

Name of the academic discipline: **BASICS OF CLINICAL GENETICS**

Specialty: **31.05.01 GENERAL MEDICINE**

Qualification: **GENERAL PRACTITIONER**

Department: **HOSPITAL PEDIATRICS**

Mode of study: **FULL-TIME**

Labor intensity of the academic discipline: **36 academic hours**

Nizhny Novgorod
2021

The working program has been developed in accordance with the Federal State Educational Standard for the specialty 31.05.01 general medicine, approved by Order of the Ministry of Science and Higher Education of the Russian Federation No.965 of August 12, 2020.

Developers of the working program:

Khaletskaya O.V., MD, professor, head of the department of hospital pediatrics
Yatsyshina E.E., PhD, associate professor of the department of hospital pediatrics
Tush E.V., PhD, associate professor of the department of hospital pediatrics

The program was reviewed and approved at the department meeting (protocol No.4, April 8, 2021)

Head of the Department
of hospital pediatrics, MD, professor

 (Khaletskaya O.V.)
(signature)

April 8, 2021

AGREED

Deputy Head of EMA ph.d. of biology  Lovtsova L.V.

(signature)

April 8, 2021

1. The purpose and objectives of mastering the academic discipline `Basics of clinical genetics` (hereinafter – the discipline):

1.1. The purpose of mastering the discipline: participation in the formation of the following universal (UC), general professional (GPC) and professional competencies (PC): UC-1, GPC-5, GPC-7, GPC-10, PC-5, PC-6, PC-7

1.2. Tasks of the discipline. Requirements to the deliverables of mastering the discipline
As a result of completing the discipline, the student should

Know:

1. Fundamentals of ethics and deontology of medical practice, taking into account social, ethnic, confessional and cultural differences

2. Fundamentals and requirements for maintaining medical records in accordance with the legislation of the Russian Federation

3. Etiology, pathogenesis, morphogenesis, clinical picture, features of the course of diseases, classification of diseases

4. Modern methods of clinical, laboratory and instrumental diagnosis of diseases.

5. Principles of therapy for the most common diseases.

6. Principles and methods of providing medical care in various emergency conditions, indications for hospitalization.

7. Assessment of the quality of medical care using the main medical and statistical indicators

8. Theoretical foundations of computer science, collection, storage, processing, transformation, dissemination of information in medical and biological systems, the use of information computer systems in medicine and healthcare. Fundamentals of evidence-based medicine.

Be able to:

1. Use ethical and deontological principles in the work of a doctor, taking into account social, ethnic, confessional and cultural differences.

2. To issue medical documentation of various nature in medical organizations of various profiles.

3. Substantiate the principles of therapy for the most common diseases; prescribe rational therapy, apply drugs, their combinations for the treatment of children, write out prescriptions for medicines.

4. Collect anamnesis, conduct a physical examination of a patient of different ages; interpret the results of the examination, substantiate the diagnosis, determine the plan of examination and treatment.

5. Fill out medical documentation of various types in medical organizations of various profiles

6. Identify life-threatening conditions and provide emergency care.

7. Analyze and evaluate the quality of medical care, the state of health of the population using the main medical and statistical indicators.

8. Use educational, scientific, popular science literature, the Internet for professional activities, methods of statistical processing of the material.

Possess:

1. Principles of ethics and deontology of a doctor in clinical practice.

2. Registration of a medical history as a legal document and other documentation in medical organizations.

3. Algorithm for prescribing therapy; modern orders, standards and protocols for the provision of medical care.

4. Collecting anamnesis, methods of general clinical examination of patients, interpreting the results of laboratory, instrumental diagnostic methods, making a clinical diagnosis.

5. Algorithm and protocols for the implementation of basic medical diagnostic and therapeutic measures, the appointment of therapy.

6. Algorithm and protocols for the provision of medical care in urgent and life-threatening conditions.

7. Algorithm for assessing the quality of medical care provided.

8. An algorithm for evaluating the main medical diagnostic and therapeutic measures to provide assistance to patients based on evidence-based medicine; presenting the results of the analysis for public discussion.

2. Position of the academic discipline in the structure of the General Educational Program of Higher Education (GEP HE) of the organization.

2.1. The discipline `Basics of clinical genetics` refers to the core part of Block 1 of GEP HE 31.05.01 general medicine.

The discipline is taught in the 6th semester/ 3rd year of study.

2.2. The following knowledge, skills and abilities formed by previous academic disciplines are required for mastering the discipline: anatomy, normal physiology, histology, biochemistry, propaedeutics of internal diseases

2.3. Mastering the discipline is required for forming the following knowledge, skills and abilities for subsequent academic disciplines: faculty therapy, occupational diseases; hospital therapy, endocrinology; polyclinic therapy; as well as industrial practices: "Physician's assistant", "Physician's assistant of an outpatient clinic"

3. Deliverables of mastering the academic discipline and metrics of competence acquisition

Mastering the discipline aims at acquiring the following universal (UC) or/and general professional (GPC) or/and professional (PC) competencies

№	Competence code	The content of the competence (or its part)	Code and name of the competence acquisition metric	As a result of mastering the discipline, the students should:		
				know	be able to	possess
1.	UC-1	Able to carry out a critical analysis of problem situations based on a systematic approach, develop an action strategy	IUC-1.1. Knows: methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis IUC-1.2. Be able to: gain new knowledge based on analysis, synthesis, etc.; collect data on complex scientific problems related to the professional field; search for information and solutions based on action, experiment and experience IUC-1.3. Has practical experience: researching the problem of professional activity using analysis, synthesis and other methods of intellectual activity; developing an action strategy to solve professional problems	methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis	gain new knowledge based on analysis, synthesis, etc.; collect data on complex scientific problems related to the professional field; search for information and solutions based on action, experiment and experience	Has practical experience: researching the problem of professional activity using analysis, synthesis and other methods of intellectual activity; developing an action strategy to solve professional problems
2.	GPC-5	Able to assess morphofunctional,	IGPC-5.1. Knows: anatomy, histology,	anatomy, histology, embryology,	evaluate the basic	Has practical experience in:

		physiological conditions and pathological processes in the human body to solve professional problems	embryology, topographic anatomy, physiology, pathological anatomy and physiology of human organs and systems. IGPC-5.2. Be able to: evaluate the basic morphological and functional data, physiological conditions and pathological processes in the human body IGPC-5.3. Has practical experience in: assessment of basic morphological and functional data, physiological conditions and pathological processes in the human body when solving professional problems	topographic anatomy, physiology, pathological anatomy and physiology of human organs and systems	morphological and functional data, physiological conditions and pathological processes in the human body	assessment of basic morphological and functional data, physiological conditions and pathological processes in the human body when solving professional problems
3.	GPC-7	Able to prescribe treatment and monitor its effectiveness and safety	IGPC-7.1. Knows: methods of drug and non-drug treatment, medical indications for the use of medical devices for the most common diseases; groups of drugs used to provide medical care in the treatment of the most common diseases; the mechanism of their action, medical indications and contraindications to the prescription; compatibility, possible complications, side effects, adverse reactions, including serious and unforeseen; features of medical care in emergency forms. IGPC-7.2. Be able to: develop a treatment plan for patients with the most common diseases in accordance with the procedures for providing medical care, clinical guidelines taking into account the standards of medical care; prevent or eliminate complications, side	methods of drug and non-drug treatment, medical indications for the use of medical devices for the most common diseases; groups of drugs used to provide medical care in the treatment of the most common diseases; the mechanism of their action, medical indications and contraindications to the prescription; compatibility, possible complications, side effects, adverse reactions, including serious and unforeseen; features of medical care in emergency forms	develop a treatment plan for patients with the most common diseases in accordance with the procedures for providing medical care, clinical guidelines taking into account the standards of medical care; prevent or eliminate complications, side effects, adverse reactions, including unforeseen ones, resulting from diagnostic or therapeutic manipulations, the use of drugs and (or) medical devices, non-drug treatment	Has practical experience in: developing a treatment plan for patients with the most common diseases in accordance with the current procedures for the provision of medical care, clinical guidelines, taking into account the standards of medical care; provision of emergency and urgent medical care to patients with the most common diseases in accordance with the current procedures for providing medical care, clinical guidelines, taking into account the standards of medical care; selection and prescription of medicines, medical devices with the most common diseases for the

			<p>effects, adverse reactions, including unforeseen ones, resulting from diagnostic or therapeutic manipulations, the use of drugs and (or) medical devices, non-drug treatment</p> <p>IGPC-7.3. Has practical experience in: developing a treatment plan for patients with the most common diseases in accordance with the current procedures for the provision of medical care, clinical guidelines, taking into account the standards of medical care; provision of emergency and urgent medical care to patients with the most common diseases in accordance with the current procedures for providing medical care, clinical guidelines, taking into account the standards of medical care; selection and prescription of medicines, medical devices with the most common diseases for the treatment of the most common diseases of children and adults in accordance with the current procedures for providing medical care, clinical recommendations, taking into account the standards of medical care; evaluation of the effectiveness and safety of the use of drugs, medical devices and non-drug treatment of patients with the most common diseases; selection and prescription of non-drug treatment for patients with the most common diseases in accordance with the procedures for</p>			<p>treatment of the most common diseases of children and adults in accordance with the current procedures for providing medical care, clinical recommendations, taking into account the standards of medical care; evaluation of the effectiveness and safety of the use of drugs, medical devices and non-drug treatment of patients with the most common diseases; selection and prescription of non-drug treatment for patients with the most common diseases in accordance with the procedures for providing medical care, clinical guidelines, taking into account the standards of medical care; prevention and treatment of complications, side effects, adverse reactions, including unforeseen ones, resulting from diagnostic or therapeutic manipulations, the use of drugs and (or) medical devices, non-drug treatment; providing medical care to patients with sudden acute diseases, conditions, exacerbation of chronic diseases without obvious signs of a threat to the patient's life in an emergency form; the use of medicines and</p>
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			<p>providing medical care, clinical guidelines, taking into account the standards of medical care; prevention and treatment of complications, side effects, adverse reactions, including unforeseen ones, resulting from diagnostic or therapeutic manipulations, the use of drugs and (or) medical devices, non-drug treatment; providing medical care to patients with sudden acute diseases, conditions, exacerbation of chronic diseases without obvious signs of a threat to the patient's life in an emergency form; the use of medicines and medical devices in the provision of medical care in an emergency form.</p>			<p>medical devices in the provision of medical care in an emergency form</p>
4	GPC-10	<p>Able to understand the principles of modern information technologies and use them to solve the tasks of professional activity</p>	<p>IGPC-10.1. Knows: the capabilities of reference information systems and professional databases; methods of information retrieval, information and communication technologies; modern medical and biological terminology; fundamentals of information security in professional activities. IGPC-10.2. Be able to: Apply modern information and communication technologies to solve the tasks of professional activity; carry out an effective search for information necessary to solve the tasks of professional activity using reference systems and professional databases; use modern medical and biological terminology; master and apply modern</p>	<p>the capabilities of reference information systems and professional databases; methods of information retrieval, information and communication technologies; modern medical and biological terminology; fundamentals of information security in professional activities</p>	<p>Apply modern information and communication technologies to solve the tasks of professional activity; carry out an effective search for information necessary to solve the tasks of professional activity using reference systems and professional databases; use modern medical and biological terminology; master and apply modern information and communication technologies in professional activity, taking into account the basic requirements of information</p>	<p>Has practical experience in the use of modern information and bibliographic resources, the use of special software and automated information systems to solve standard tasks of professional activity, taking into account the basic requirements of information security</p>

			<p>information and communication technologies in professional activity, taking into account the basic requirements of information security. IGPC-10.3. Has practical experience in the use of modern information and bibliographic resources, the use of special software and automated information systems to solve standard tasks of professional activity, taking into account the basic requirements of information security</p>		security	
5	PC-5	<p>Able to collect complaints, anamnesis of the patient's life and illness, conduct a complete physical examination of the patient (examination, palpation, percussion, auscultation), formulate a preliminary diagnosis and draw up a plan for laboratory and instrumental examinations of the patient</p>	<p>IPC-5.1. Knows: the legislation of the Russian Federation in the field of health care, regulations and other documents that determine the activities of medical organizations and healthcare workers; method of collecting complaints, anamnesis of life and disease of the patient; a technique for a complete physical examination of the patient (examination, palpation, percussion, auscultation); etiology, pathogenesis and pathomorphology, clinical aspect, differential diagnosis, clinical features, complications and outcomes of diseases of internal organs; patterns of functioning of a healthy human body and mechanisms for ensuring health from the standpoint of the theory of functional systems; features of the regulation of the functional systems of the human body in pathological processes; methods of laboratory and instrumental examinations for assessing the state of</p>	<p>the legislation of the Russian Federation in the field of health care, regulations and other documents that determine the activities of medical organizations and healthcare workers; method of collecting complaints, anamnesis of life and disease of the patient; a technique for a complete physical examination of the patient (examination, palpation, percussion, auscultation); etiology, pathogenesis and pathomorphology, clinical aspect, differential diagnosis, clinical features, complications and outcomes of diseases of internal organs; patterns of functioning of a healthy human body and mechanisms for ensuring health from the standpoint of the theory of</p>	<p>collect complaints, anamnesis of life and disease of the patient and analyze the information received; conduct a complete physical examination of the patient (examination, palpation, percussion, auscultation) and interpret its results; determine the sequence of volume, content and sequence of diagnostic measures incl. modern digital technologies</p>	

			<p>health, medical indications for conducting investigations, rules for interpreting their results.</p> <p>IPC-5.2. Be able to: collect complaints, anamnesis of life and disease of the patient and analyze the information received; conduct a complete physical examination of the patient (examination, palpation, percussion, auscultation) and interpret its results; determine the sequence of volume, content and sequence of diagnostic measures incl. modern digital technologies</p>	<p>functional systems; features of the regulation of the functional systems of the human body in pathological processes; methods of laboratory and instrumental examinations for assessing the state of health, medical indications for conducting investigations, rules for interpreting their results</p>		
6	PC-6	<p>Able to send a patient to laboratory, instrumental examination, to a consultation with specialist doctors if there are medical indications in accordance with the current procedures for the provision of medical care, clinical recommendations (treatment protocols) on providing medical care taking into account the standards of medical care, and also refer the patient for providing specialized medical care in an inpatient setting or in a day hospital if there are medical indications in accordance with the current procedures for the medical care delivery, clinical</p>	<p>IPC-6.1. Knows: general issues of organizing medical care for the population, methods of laboratory and instrumental examinations to assess the state of health, medical indications for conducting examinations, rules for interpreting their results; procedures for the provision of medical care, clinical recommendations (treatment protocols) on the provision of medical care, standards of medical care.</p> <p>IPC-6.2. Be able to: justify the need and scope of laboratory examination of the patient; justify the need and scope of instrumental examination of the patient; justify the need to refer the patient for consultations with specialist doctors; determine medical indications for the provision of emergency, including emergency specialized, medical care</p>	<p>general issues of organizing medical care for the population, methods of laboratory and instrumental examinations to assess the state of health, medical indications for conducting examinations, rules for interpreting their results; procedures for the provision of medical care, clinical recommendations (treatment protocols) on the provision of medical care, standards of medical care</p>	<p>justify the need and scope of laboratory examination of the patient; justify the need and scope of instrumental examination of the patient; justify the need to refer the patient for consultations with specialist doctors; determine medical indications for the provision of emergency, including emergency specialized, medical care</p>	

		recommendations (treatment protocols) on the medical care delivery taking into account the standards of medical care				
7	PC-7	Able to: make a differential diagnosis with other diseases/conditions including emergencies, establish a diagnosis taking into account the current international statistical classification of diseases and related health problems (ICD)	<p>IPC-7.1. Knows: etiology, pathogenesis and pathomorphology, clinical aspect, differential diagnosis, clinical features, complications and outcomes of diseases of internal organs; methods of laboratory and instrumental examinations for assessing the state of health, medical indications for conducting examinations, rules for interpreting their results; ICD.</p> <p>IPC-6.2. Be able to: analyze the results of the patient's examination, if necessary, justify and plan the scope of additional examinations; interpret the results of collecting information about the patient's disease; interpret the data obtained during the laboratory examination of the patient; interpret the data obtained during the instrumental examination of the patient; interpret the data obtained during consultations of the patient by medical specialists; to carry out differential diagnostics of diseases of internal organs from other diseases</p>	etiology, pathogenesis and pathomorphology, clinical aspect, differential diagnosis, clinical features, complications and outcomes of diseases of internal organs; methods of laboratory and instrumental examinations for assessing the state of health, medical indications for conducting examinations, rules for interpreting their results; ICD	analyze the results of the patient's examination, if necessary, justify and plan the scope of additional examinations; interpret the results of collecting information about the patient's disease; interpret the data obtained during the laboratory examination of the patient; interpret the data obtained during the instrumental examination of the patient; interpret the data obtained during consultations of the patient by medical specialists; to carry out differential diagnostics of diseases of internal organs from other diseases	

4. Sections of the academic discipline and competencies that are formed when mastering them

№	Competence code	Section name of the discipline	The content of the section in teaching units
1.	UC-1 GPC-5 GPC-7 GPC-10 PC-5 PC-6 PC-7	Introduction to clinical genetics. Personalized diagnosis and treatment of hereditary diseases.	Medical genetics as a science. Clinical genetics, tasks. General patterns of pathogenesis of hereditary diseases. Classification and modern diagnosis of hereditary diseases. Hereditary pathology and methods of its study. genealogical method. The concept of personalized medicine. Personalized diagnosis and treatment of hereditary diseases. Determining the tactics of managing a patient with hereditary diseases.
2.	UC-1 GPC-5 GPC-7 GPC-10 PC-5 PC-6 PC-7	Modern genetic research methods. Medical genetic counseling.	Modern genetic research methods, indications, interpretation of results. Neonatal screening. Tasks and indications for medical genetic counseling. Principles and stages of counseling.
3.	UC-1 GPC-5 GPC-7 GPC-10 PC-5 PC-6 PC-7	Chromosomal diseases. Prenatal diagnosis of congenital and hereditary diseases.	Definition and modern classification. Factors that cause human chromosomal diseases. Characteristics of the main human chromosomal diseases. Prevention of chromosomal diseases. Modern methods of diagnosing chromosomal diseases. Modern methods of treatment and rehabilitation of patients with chromosomal diseases. Prenatal diagnosis of congenital and hereditary diseases. Prevention of congenital pathology in women at high risk.

5. Volume of the academic discipline and types of academic work

Type of educational work	Labor intensity				Labor intensity (AH) in semesters	
	volume in credit (CU)	in units	volume in academic (AH)	in hours	5 th semester	6 th semester
Classroom work, including						
Lectures (L)	0,1		6			6
Laboratory practicum (LP)*						
Practicals (P)						
Clinical Practice (CP)	0,5		16			16
Seminars (S)						
Student's individual work (SIW)	0,4		14			14
Mid-term assessment						
credit						credit
TOTAL LABOR INTENSITY	1,0		36			36

6. Content of the academic discipline

6.1. Sections of the discipline and types of academic work

№	Name of the section of the academic discipline	Types of academic work* (in AH)						
		L	LP	P	CP	S	SIW	total
1.	Introduction to clinical genetics. Personalized diagnosis and treatment of hereditary diseases.	2			6		4	12
2.	Modern genetic research methods. Medical genetic counseling.	2			5		5	12

3.	Chromosomal diseases. Prenatal diagnosis of congenital and hereditary diseases.	2			5		5	12
	TOTAL	6			16		14	36

* - L – lectures; LP – laboratory practicum; P – practicals; CP – Clinical Practice; S – seminars; SIW – student’s individual work.

6.2. Thematic schedule of educational work types:

6.2.1 Thematic schedule of lectures

№	Name of lecture topics	Volume in AH	
		semester 6	
1.	Basics of clinical genetics.	2	
2.	Modern technologies for diagnosing hereditary diseases.	2	
3.	Chromosomal diseases.	2	
	TOTAL (total - AH)	6	

6.2.2. The thematic plan of laboratory practicums – **this type of classes is not stipulated in the curriculum.**

6.2.3. Thematic plan of clinical practice

№	Name of the topics of clinical practice	Volume in AH	
		semester 6	
1.	Hereditary pathology and methods of its study. genealogical method. Personalized diagnosis and treatment of hereditary diseases.	6	
2.	Modern genetic research methods. Medical genetic counseling.	5	
3.	Chromosomal diseases. Prenatal diagnosis of congenital and hereditary diseases.	5	
	TOTAL (total - AH)	16	

6.2.4. Thematic plan of seminars – **this type of classes is not stipulated in the curriculum.**

6.2.5. Types and topics of student’s individual work (SIW)

№	Types and topics of SIW	Volume in AH	
		semester 6	
1.	Preparation for clinical practical classes, homework, preparation for current control	5	
2.	Working with lecture material	2	
3.	Working with electronic resources on the PRMU distance education portal	3	
4.	The study of material submitted for independent study (separate topics, paragraphs), work with literary sources	2	
5.	Preparation for testing, online testing	2	
	TOTAL (total - AH)	14	

7. Types of assessment formats for ongoing monitoring and mid-term assessment

№	Semester No.	Types of control		Name of section of academic discipline	Competence codes	Assessment formats		
						types	number of test questions	number of test task options
1.	6	Current monitoring	Control of mastering the topic	Introduction to clinical genetics. Personalized diagnosis and treatment of hereditary diseases.	UC-1; GPC-5; GPC-7; GPC-10; PC-5; PC-6; PC-7	interview	4	93
			Monitoring the student's individual work			test	15	50
2.	6	Current monitoring	Control of mastering the topic	Modern genetic research methods. Medical genetic counseling.	UC-1; GPC-5; GPC-7; GPC-10; PC-5; PC-6; PC-7	interview	1	43
			Monitoring the student's individual work			test	30	50
3.	6	Current monitoring	Control of mastering the topic	Chromosomal diseases. Prenatal diagnosis of congenital and hereditary diseases.	UC-1; GPC-5; GPC-7; GPC-10; PC-5; PC-6; PC-7	interview	1	43
			Monitoring the student's individual work			test	30	50
2.	6	Mid-term assessment	Exam/Credit		UC-1; GPC-5; GPC-7; GPC-10; PC-5; PC-6; PC-7	situational tasks	1	10

8. Educational, methodological and informational support for mastering the academic discipline (printed, electronic publications, the Internet and other network resources)

8.1. Key literature references

№	Name according to bibliographic requirements	Number of copies	
		at the department	in the library
1.	Nelson textbook of Pediatrics. V. 1 : Nelson textbook of Pediatrics. – [S. I.] : Elsevier, 2020. – 21ed. – LXXV, 1900 p. : ill. – ISBN 978-0-323-56890-6.	-	14
2.	Nelson textbook of Pediatrics. V. 2 : Nelson textbook of Pediatrics. – [S. I.] : Elsevier, 2020. – 21ed. – LXXV, 1926 p. : ill. – ISBN 978-0-323-56890-6 .	-	14
	Khaletskaya, O. V. Basics of clinical genetics : a training manual for students / O. V. Khaletskaya, E. V.	Electronic resource	Electronic resource

	Tush, A. N. Kolchina ; FSBEI HE «PRMU» MOH Russia. – N. Novgorod : Publishing House of Privolzhskiy Research Medical University, 2021. – 1 файл (2.16 Мб). – ISBN 978-5-7032-1406-0.		
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8.2. Further reading

№	Name according to bibliographic requirements	Number of copies	
		at the department	in the library
1.	General biology. Molecular genetics : Handbook for international students / E. S. Knyazeva, O. M. Moskovtseva, I. N. Kalashnikov, T. G. Scherbatyuk . – FSBEI HE «PRMU» MOH Russia. – N. Novgorod : Publishing House of Privolzhskiy Research Medical University, 2021. – 1 файл. – ISBN 978-5-7032-1421-3.	Electronic resource	
2.	Motor system disorders in neurological clinic : the textbook / V. N. Grigorieva, I. G. Stelnikova, T. A. Sorokina, A. A. Melnikov ; FSBEI HE PRMU MOH Russia. – N. Novgorod : Publishing House of Privolzhskiy Research Medical University, 2021. – 1 файл (4.72 Мб). – ISBN 978-5-7032-1407-7.	Electronic resource	
3.	Nelson essentials of pediatrics / K. J. Marcante, R. M. Kliegman. – 8th ed. – Philadelphia : Elsevier, 2019. – XIII, 818 p. : ill. – ISBN 978-0-323-52735-4.	14	

8.3. Electronic educational resources for teaching academic subjects

8.3.1. Internal Electronic Library System of the University (IELSU)

№	Name of the electronic resource	Brief description (content)	Access conditions	Number of users
	Internal electronic library system (IELSU)	Proceedings of the teaching staff of the Academy: textbooks and teaching aids, monographs, collections of scientific papers, scientific articles, dissertations, abstracts of dissertations, patents.	from any computer on the Internet, using an individual login and password [Electronic resource] - Access mode: http://95.79.46.206/login.php	Not limited

8.3.2. Electronic educational resources acquired by the University

№	Name of the electronic resource	Brief description (content)	Access conditions	Number of users
	Electronic database "Student Advisor"	Educational literature + additional materials (audio, video, interactive materials, test tasks) for higher medical and pharmaceutical education. Editions are structured by specialties and disciplines in accordance with the current Federal State Educational Standards of	from any computer on the Internet, using an individual login and password [Electronic resource] - Access mode: http://www.studmedlib.ru/	General Subscription

		Higher Professional Education.		
	Electronic library system "BookUp"	Educational and scientific medical literature of Russian publishing houses, incl. translations of foreign publications.	from any computer located on the Internet by login and password, from the computers of the academy. Subscribed editions are available for reading. [Electronic resource] - Access mode: http://www.books-up.ru/	General Subscription
	"Bibliopisk"	Integrated search service "single window" for electronic catalogs, ELS and full-text databases. The results of a single search in the demo version include documents from domestic and foreign electronic libraries and databases available to the university as part of a subscription, as well as from open access databases.	access to the demo version of the Bibliopisk search engine: http://bibliosearch.ru/pimu .	General Subscription
	Domestic electronic periodicals	Periodicals on medical topics and higher education	- from the computers of the academy on the platform of the electronic library eLIBRARY.RU -magazines publishing house "Mediasphere" - from the computers of the library or provided library at the request of the user [Electronic resource] - Access mode: https://elibrary.ru/	
	International scientometric database "Web of Science Core Collection"	Web of Science covers materials on natural, technical, social, humanities; takes into account the mutual citation of publications developed	[Electronic resource] - Access to the resource at: http://apps.webofknowledge.com	Free access from university computers

		and provided by Thomson Reuters; has built-in search, analysis and management of bibliographic information.		
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8.3.3 Open access resources

№	Name of the electronic resource	Brief description (content)	Access conditions
	Federal Electronic Medical Library	Includes electronic analogues of printed publications and original electronic publications that have no analogues recorded on other media (dissertations, abstracts, books, magazines, etc.). [Electronic resource] - Access mode: http://feml.pf/	from any computer on the Internet
	Scientific electronic library eLIBRARY.RU	The largest Russian information portal in the field of science, technology, medicine and education, containing abstracts and full texts of scientific articles and publications. [Electronic resource] - Access mode: https://elibrary.ru/	from any computer on the Internet
	Scientific electronic library of open access CyberLeninka	Full texts of scientific articles with annotations published in scientific journals in Russia and neighboring countries. [Electronic resource] - Access mode: https://cyberleninka.ru/	from any computer on the Internet
	Russian State Library	Abstracts for which there are copyright agreements with permission for their open publication [Electronic resource] - Access mode: http://www.rsl.ru/	from any computer on the Internet
	Reference and legal system "Consultant Plus"	Federal and regional legislation, judicial practice, financial advice, legislative comments, etc. [Electronic resource] - Access mode: http://www.consultant.ru/	from any computer on the Internet
	Official website of the Ministry of Health of the Russian Federation	National Clinical Guidelines [Electronic resource] - Access mode: cr.rosminzdrav.ru - Clinical recommendations	from any computer on the Internet
	Modern materials and clinical guidelines for the diagnosis and treatment of diseases in children	National Clinical Guidelines [Electronic resource] - Access mode: https://www.pediatr-russia.ru	from any computer on the Internet
	Russian Society of Medical Genetics	Modern materials and clinical guidelines for the diagnosis and treatment of hereditary diseases	from any computer on the Internet

		[Electronic resource] - Access mode: http://www.romg.org	
	Official website with basic information on orphan diseases	Modern materials and clinical guidelines for the diagnosis and treatment of orphan diseases [Electronic resource] - Access mode: www.orpha.net	from any computer on the Internet

9. Material and technical support for mastering an academic discipline

9.1. List of premises for classroom activities for the discipline

1. 3 study rooms
2. Conference room
3. Computer classroom

9.2. List of equipment for classroom activities for the discipline

1. Multimedia complex
2. Information stands on the medical and protective regimen in the Hospital, nutrition and hygiene of patients.
3. Medical documentation: medical history, outpatient card
4. Archival and educational case histories
5. Slides and multimedia presentations of lectures.
6. Boards

9.3. A set of licensed and freely distributed software, including domestic production

Item no.	Software	number of licenses	Type of software	Manufacturer	Number in the unified register of Russian software	Contract No. and date
1	Wtware	100	Thin Client Operating System	Kovalev Andrey Alexandrovich	1960	2471/05-18 from 28.05.2018
2	MyOffice is Standard. A corporate user license for educational organizations, with no expiration date, with the right to receive updates for 1 year.	220	Office Application	LLC "NEW CLOUD TECHNOLOGIES"	283	without limitation, with the right to receive updates for 1 year.
3	LibreOffice		Office Application	The Document Foundation	Freely distributed software	
4	Windows 10 Education	700	Operating systems	Microsoft	Azure Dev Tools for Teaching Subscription	
5	Yandex. Browser		Browser	«Yandex»	3722	

6	Subscription to MS Office Pro for 170 PCs for FGBOU VO "PIMU" of the Ministry of Health of Russia	170	Office Application	Microsoft	23618/HN100 30 LLC "Softline Trade" from 04.12.2020
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10. List of changes to the working program (to be filled out by the template)

Federal State Budgetary Educational Institution of Higher Education
"Privolzhsky Research Medical University"
Ministry of Health of the Russian Federation
(FSBEI HE "PRMU" of the Ministry of Health of Russia)

Department of
Name of the department

CHANGE REGISTRATION SHEET

working program for the academic discipline
BASICS OF CLINICAL GENETICS

Field of study / specialty / scientific specialty: _____
(code, name)

Training profile: _____
(name) - for master's degree programs

Mode of study: _____
full-time/mixed attendance mode/extramural

Position	Number and name of the program section	Contents of the changes made	Effective date of the changes	Contributor's signature
1				

Approved at the department meeting
Protocol No. 4 of April, 8 2021

Head of the Department
of hospital pediatrics, MD, professor _____ / Khaletskaya O.V.
department name, academic title signature print name