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



WORKING PROGRAM

Name of the academic discipline: CLINICAL PHARMACOLOGY

Specialty: 31.05.01 GENERAL MEDICINE

Qualification: GENERAL PRACTITIONER

Department: GENERAL AND CLINICAL PHARMACOLOGY

Mode of study: FULL-TIME

Labor intensity of the academic discipline: 108 academic hours

Nizhny Novgorod 2021 The working program has been developed in accordance with the Federal State Educational Standard for specialty 31.05.01 GENERAL MEDICINE approved by Order of the Ministry of Science and Higher Education of the Russian Federation No. 988 of August 12, 2020.

Developers of the working program:

Yulia Andreevna Sorokina, PhD, Associate professors of the Department of General and Clinical Pharmacology of PRMU;

Alexander Lvovich Barsuk, MD, PhD, Associate professors of the Department of General and Clinical Pharmacology of PRMU;

Galina Vasilievna Rudakova, MD, PhD, Associate professors of the Department of General and Clinical Pharmacology of PRMU

Reviewers:

1. Professor of the Department of Pharmacology and Clinical Pharmacology with a Course in Pharmaceutical Technology at the Ogarev National Research Mordovian State University of the Ministry of Science and Higher Education of the Russian Federation, Doctor of Medical Sciences, Professor

A. V. Siprov.

2. Head of the Department of Propaedeutics of Internal Diseases of the Federal State Budgetary Educational Institution of Higher Education "PIMU" of the Ministry of Health of the Russian Federation, Doctor of Medical Sciences, Associate Professor E. V. Makarova.

The program was reviewed and approved at the meeting of the Department (Minutes No. 7 of 09.06.2021)

Head of the Department of General and Clinical Pharmacology, Doctor of Medical Sciences, Associate Professor ______ L. V. Lovtsova 09.06.2021

(signature)

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

09.06.2021

1.1. The purpose of mastering the discipline: (*participation in forming the relevant competencies*).

1.2. Tasks of the discipline:

based on the knowledge of pharmacodynamics, pharmacokinetics, drug interactions, their undesirable effects, taking into account the identified nosological forms of diseases, concomitant conditions and anatomical and physiological characteristics of the body, to form clinical and pharmacological methods of effective and safe use, development of methods for effective and safe use of medicines.

1.3. Requirements to the deliverables of mastering the discipline

As a result of completing the discipline, the student should **Know:**

• methods of drug treatment; 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 appointment; compatibility, possible complications, side effects, undesirable reactions, including serious and unforeseen ones;

• capabilities of reference information systems and professional databases;

• modern methods of using medicines for diseases and conditions of the patient in accordance with the current procedures for providing medical care, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care; the mechanism of action of medicines, indications and contraindications to their use; complications caused by their use.

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 actions, experiments, and experience;

• develop a treatment plan for patients with the most common diseases in accordance with the procedures for providing medical care, clinical recommendations, taking into account the standards of medical care; prevent or eliminate complications, side effects, undesirable reactions, including unforeseen ones that have occurred as a result of diagnostic or therapeutic manipulations, the use of medicines;

• make a treatment plan for the disease and the patient's condition, taking into account the diagnosis, the patient's age, the clinical picture of the disease in accordance with the current procedures for providing medical care, clinical recommendations (treatment protocols) for providing medical care, taking into account the standards of medical care;

• prescribe medications based on the diagnosis, age, and clinical picture of the disease in accordance with the current procedures for providing medical care, clinical recommendations (treatment protocols) for providing medical care, taking into account the standards of medical care; evaluate the effectiveness and safety of drug use.

Possess:

• development of a treatment plan for patients with the most common diseases in accordance with the current procedures for providing medical care, clinical recommendations, and taking into account the standards of medical care;

• selection and administration of medicines to patients with the most common diseases;

• evaluation of the effectiveness and safety of drug use in patients with the most common diseases;

• prevention and treatment of complications, side effects, and adverse reactions, including unforeseen ones, that have occurred as a result of the use of medications;

• the use of medicines in the provision of medical care in an emergency form.

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 clinical pharmacology refers to the core part (or *the part formed by the participants of educational relations*) of Block 1 (B1. O. 26) of GEP HE (Academic discipline index).

The discipline is taught in _12____ semester/__6th_ year of study.

2.2. The following knowledge, skills and abilities formed by previous academic disciplines are required for mastering the discipline:

- Latin language, атинский язык,
- biochemistry,
- microbiology,
- virology,
- pharmacology,
- propaedeutics of internal diseases,
- *faculty therapy.*

2.3. Mastering the discipline is required for forming the following knowledge, skills and abilities for subsequent academic disciplines:

- polyclinic and emergency therapy,
- hospital therapy.

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

	Comp	The content of	Code and name of the		of mastering th e students shou	-
N⁰	N_{2} etence the	the competence (or its part)	competence acquisition metric	know	be able to	possess
1.	UC-1	Able to carry out a critical analysis of problem situations on the basis of a systematic approach to develop a strategy of action	IUC 1.2. Knows how to acquire new knowledge on the basis of analysis, synthesis, etc.; to collect data on complex scientific issues related to the professional field; to search for information and solutions on the basis of action, experimentation and experience IUC 1.3 Has practical experience in the study of problems of professional activities with the use of analysis, synthesis and other methods of intellectual activity;	 General laws of the pharmacok inetics and pharmacod ynamics of drugs (PK AND PD); PK AND PD belonging to certain pharmacol ogical group, pharmacod ynamics and 	 to define groups of drugs for the treatment of a certain disease; to analyze the effect of drugs on the totality of their pharmacolo gical properties and the ability to use drugs for 	• skills prescription of a drug for the treatment of various diseases and pathologica l processes in the adult population

			developing action strategies for solving professional problems	pharmacok inetics of drugs, indications , side effects, contraindic ations	therapeutic treatment of the adult population; to predict and evaluate adverse drug reaction	
2.	GPC-7	IGPC 7.1. Knows methods of medical treatment, groups of drugs used for medical care in the treatment of most common diseases and their mechanism of action, medical indications and contraindications to the appointment; compatibility, possible complications, side effects, adverse reactions, including serious and unexpected; features provide medical care in case of emergency forms IGPC -7.2. Is able to: develop a treatment plan for patients with the most common diseases in accordance with the procedures for providing medical care, clinical recommendations, taking into account the standards of medical care;	 methods of medical treatment; groups of drugs used for medical care in the treatment of most common diseases and their mechanism of action, medical indications and contraindications to the appointment; compatibility, possible complications, side effects, adverse reactions, including serious and unexpected; the possibility of reference and information systems and professional databases; modern methods of use of drugs in diseases and conditions of the patient in accordance with the applicable procedures of medical care, clinical recommendations (treatment protocols) on the provision of medical services standards of medical care; the mechanism of action of drugs, indications and contraindications for their use; complications caused by their use. 	 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 actions, experiments , and experience; develop a treatment plan for patients with the most common diseases in accordance with the procedures for providing medical care, clinical recommend ations, and taking into account the standards of medical care to prevent or 	practical experience: • developing a treatment plan for patients with the most common diseases in accordance with the current medical care procedures, clinical recommendat ions, taking into account the standards of medical care; • selecting and prescribing medicines to patients with the most common diseases; • evaluating the effectiveness and safety of using medicines in patients with the most common diseases; • evaluating the effectiveness and safety of using medicines in patients with the most common diseases; • prevention and treatment of complications , side effects, actions, use	 methods of medical treatment; groups of drugs used for medical care in the treatment of most common diseases and their mechanism of action, medical indications and contraindicat ions to the appointment; compatibilit y, possible complication s, side effects, adverse reactions, including serious and unexpected; the possibility of reference and information systems and professional databases; modern methods of use of drugs in diseases and conditions of the patient in accordance with the

prevent or eliminate	eliminate	adverse	applicable
complications, side	complicatio	reactions,	procedures
effects, undesirable	ns, side	including	of medical
reactions, including	effects,	unforeseen	care, clinical
unforeseen ones	undesirable	ones that	recommenda
that have occurred	reactions,	have	tions
as a result of	including	occurred as a	(treatment
diagnostic or	unforeseen	result of the	protocols) on
therapeutic	ones, that	use of	the provision
manipulations, the	have	medicines;	of medical
use of medicines.	occurred as	• the use of	services
IGPC -7.3. Has	a result of	medicines in	standards of
practical	diagnostic	the provision	medical
experience in the	or	of medical	care; the
development of	therapeutic	care in an	mechanism
the treatment plan	manipulatio	emergency	of action of
of patients with	ns, the use	form.	drugs,
the most common	of	101111	indications
diseases in	medications		and
accordance with	;		contraindicat
the applicable	• to make a		ions for their
procedures of	treatment		use;
medical care,	plan for the		complication
clinical guidelines,	disease and		s caused by
the standards of	the patient's		their use.
medical care;	condition,		ulen ube.
medical care in	taking into		
emergency	account the		
patients with the			
most common	diagnosis,		
diseases, in	age of the		
accordance with	patient, the clinical		
the applicable	picture of		
procedures of	the disease		
*	in usease		
medical care, clinical guidelines,			
the standards of	accordance with the		
medical care;	current		
selecting and	medical		
prescribing to	care		
patients with the	procedures,		
most common	clinical		
diseases in	recommend		
accordance with	ations		
the applicable	(treatment		
procedures of	protocols		
medical care,	prescribe		
clinical guidelines,	medications		
the standards of	based on		
medical care;	the		
evaluation of the	diagnosis,		
efficacy and safety	age and		
of the use of drugs	clinical		
in patients with	picture of		
the most common	the disease		
diseases;	in		
prevention and	accordance		

		treatment of		with the		
		complications,		current		
		side effects,		procedures		
		adverse reactions,		for		
		including		providing		
		emergency		medical		
		resulting from		care,		
		diagnostic or		clinical		
		therapeutic		recommend		
		procedures, the		ations		
		use of drugs; the		(treatment		
		provision of		protocols)		
		medical care to		for		
		patients with		providing		
		sudden acute		medical		
		diseases,		care based		
		conditions,		on the		
		exacerbation of		standards of		
		chronic diseases		medical		
		without obvious		care;		
		signs of		evaluate the effectivenes		
		threatening the life of the patient in				
		the emergency		s and safety of the use		
		form; the use of		of the use		
		drugs in the		medicines.		
		provision of		medicines.		
		medical care in the				
		emergency form				
3.	PC-8	<u>Able</u> to develop	IPC-8.1. Knows: modern	• methods	• gain new	• methods of
		a plan of	methods of using medicines	of drug	knowledge	drug
		treatment for the	for diseases and conditions	treatment;	based on	treatment;
		disease or	in the patient in accordance	groups of	analysis,	groups of
		condition and to	with the current procedures	drugs used	-	drugs used
		prescribe	for providing medical care,	to provide	etc.; collect	to provide
		medications,	clinical recommendations	medical	data on	medical care
		medical	(treatment protocols) on the	care in the	complex	in the
		products, health	provision of medical care,	treatment of	scientific	treatment of
		food and non-	taking into account the	the most common	problems related to the	the most common
		pharmacological	standards medical care;	diseases;	professional	diseases; the
		treatment	mechanism of action of	the	field; search	mechanism
		according to	medicinal products,	mechanism	for	of their
		diagnosis, age	medical indications and	of their	information	action,
		and clinical	contraindications to their	action,	and solutions	medical
		presentation <u>in</u>	use; complications caused	medical	based on	indications
		accordance with	by their use	indications	actions,	and
		the applicable	IPC-8.2. Can: make a	and	experiments,	contraindicat
			treatment plan for the disease	contraindica	and	ions to the
		procedures of modical cara	and the patient's condition,	tions to the	experience;	appointment;
		medical care,	taking into account the	appointmen	• develop a	compatibilit
		<u>clinical</u>	diagnosis, age of the patient,	t;	treatment	y, possible
		recommendation	clinical picture of the disease in	compatibilit	plan for	complication
		<u>s (treatment</u>	accordance with the current	y, possible	patients with	s, side
		protocols) on the	procedures for providing	complicatio	the most	effects,
		provision of	· · · ·	ns, side	common	undesirable

medical	medical care, clinical	effects,	diseases in	reactions,
	recommendations (treatment	-	accordance	including
assistance,	protocols) on medical care,	reactions,	with the	serious and
taking into	taking into account the	including	procedures	unforeseen
account	standards of medical care;	serious and	for providing	ones;
standards to	prescribe medications, taking	unforeseen	medical care,	• the
assess the	into account the diagnosis, age	ones;	clinical	capabilities
effectiveness and	and clinical picture of the		recommendat	of reference
safety of the use	disease in accordance with	capabilities	ions, and	and
of medicines,	current procedures for the	of reference	taking into	information
medical devices,	provision of medical care,	and	account the	systems and
therapeutic	clinical recommendations	information	standards of	professional
nutrition and	(treatment protocols) on the	systems and	medical care	databases;
other methods of	provision of medical care,	professional	to prevent or	modern
treatment	taking into account the	databases;	eliminate	methods use
	standards of medical care;	modern	complications	of medicinal
	evaluate the effectiveness and	methods	, side effects,	products for
	safety of the use of medicines.	use of	undesirable	diseases and
		medicinal	reactions,	conditions of
		products for	including	the patient in
		diseases	unforeseen	accordance
		and	ones, that	with the
		conditions	have	current
		of the	occurred as a	procedures
		patient in	result of	for providing
		accordance	diagnostic or	medical
		with the	therapeutic	care, clinical
		current	manipulation s, the use of	recommenda
		procedures	s, the use of medications;	tions
		for	• to make a	(treatment
		providing medical		protocols) on the provision
			treatment plan for the	the provision of medical
		care, clinical	disease and	care, taking
		recommend		into account
		ations	condition,	the standards
		(treatment	taking into	of medical
		protocols)	account the	care; the
		on the	diagnosis,	mechanism
		provision of	age of the	of action of
		medical	patient, the	medicinal
		care, taking	clinical	products,
		into account	picture of the	indications
		the	disease in	and
		standards of	accordance	contraindicat
		medical	with the	ions to their
		care; the	current	use;
		mechanism	medical care	complication
		of action of	procedures,	s caused by
		medicinal	clinical	their use.
		products,	recommendat	
		indications	ions	
		and	(treatment	
		contraindica	protocols	
		tions to	prescribe	
		their use;	medications	
		complicatio	based on the	

				ns caused	diagnosis,	
				by their use.	age and	
				-	clinical	
					picture of the	
					disease in	
					accordance	
					with the	
					current	
					procedures	
					for providing	
					medical care,	
					clinical	
					recommendat	
					ions	
					(treatment	
					protocols) for	
					providing	
					medical care	
					based on the	
					standards of	
					medical care; evaluate the	
					effectiveness	
					and safety of	
					the use of	
					medicines.	
4.	PC-10	able to organize	IPC-10. Knows: modern	• methods	• gain new	• practical
	1010	personalized	methods of using medicines	of drug	knowledge	experience:
		treatment of	for diseases and conditions of	treatment;	based on	developing
		patients, including	the patient in accordance with	groups of	analysis,	a treatment
		pregnant women,	the current procedures for	drugs used	synthesis,	plan for
		elderly and senile	providing medical care,	to provide	etc.; collect	patients with
		patients, and	clinical recommendations	medical	data on	the most
		evaluate the	(treatment protocols) on the	care in the	complex	common
		effectiveness and	provision of medical care,	treatment of	scientific	diseases in
		<u>safety</u>	taking into account the	the most	problems	accordance
			standards of medical care; the	common	related to the	with the
			mechanism of action of	diseases;	professional	current
			medicines, medical	the	field; search	medical care
			indications and	mechanism	for	procedures,
			contraindications to their use;	of their	information	clinical
			complications caused by their	action,	and solutions	recommenda
			use. IPC-10.2. Is able to: prescribe	medical	based on	tions, taking
			medications based on the	indications	actions,	into account
			diagnosis, age and clinical	and contraindica	experiments,	the standards
			picture of the disease in	tions to the	and	of medical
			accordance with the current		experience;	care;
			procedures for providing	appointmen t;	• develop a	• selecting
			medical care, clinical	compatibilit	treatment	and
			recommendations (treatment	y, possible	plan for	prescribing
			protocols) for providing	complicatio	patients with the most	medicines to
			medical care, taking into	ns, side	the most common	patients with
1			account the standards of	effects,	diseases in	the most
			medical care; evaluate the	undesirable	accordance	common
	1		effectiveness and safety of the	reactions,		diseases;
			effectiveness and safety of the	reactions.	with the	• · · · · · ·
			use of medicines.	including	with the procedures	• evaluating

			aniona and	for more din a	4h a
			serious and	for providing	the
			unforeseen	medical care,	effectiveness
			ones;	clinical	and safety of
			• the	recommendat	using
			capabilities	ions, and	medicines in
			of reference	taking into	patients with
			and	account the	the most
			information	standards of	common
			systems and	medical care	diseases;
			professional	to prevent or	• prevention
			databases;	eliminate	and
			modern	complications	treatment of
			methods	, side effects,	complication
			use of	undesirable	s, side
			medicinal	reactions,	effects, and
			products for	including	side effects.
1			diseases	unforeseen	actions,
1			and	ones, that	adverse
			conditions	have occurred as a	reactions,
1			of the	result of	including
			patient in		unforeseen
			accordance	diagnostic or	ones that
			with the	therapeutic	have
			current	manipulation s, the use of	occurred as a
			procedures	medications;	result of the
			for		use of
			providing	• to make a	medicines;
			medical	treatment	• the use of
			care, clinical	plan for the disease and	medicines in
					the provision
			recommend ations	the patient's condition,	of medical
			(treatment	taking into	care in an
			protocols)	account the	emergency
			on the	diagnosis,	form.
			provision of	age of the	
			medical	patient, the	
			care, taking	clinical	
1			into account	picture of the	
1			the	disease in	
			standards of	accordance	
			medical	with the	
			care; the	current	
			mechanism	medical care	
			of action of	procedures,	
			medicinal	clinical	
			products,	recommendat	
			indications	ions	
1			and	(treatment	
1			contraindica	protocols) on	
1			tions to	issues related	
			their use;	to the	
			complicatio	provision of	
			ns caused	medical care,	
			by their use.	taking into	
				account the	
1				standards of	
L	1				

			medical source
			medical care;
			prescribe
			medications
			based on the
			diagnosis,
			age, and
			clinical
			picture of the
			disease in
			accordance
			with the
			current
			procedures
			for providing
			medical care,
			clinical
			recommendat
			ions
			(treatment
			protocols) for
			providing
			medical care,
			taking into
			account the
			standards of
			medical care;
			evaluate the
			effectiveness
			and safety of
			drug use.
L	1		0

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

N⁰	Competence code	Section name of the discipline	The content of the section in teaching units
1	UC-1 (IUC-1.2, IUC-1.3), GPC-7 (I GPC -7.1; I GPC - 7.2; I GPC - 7.3), PC-8 (IPC-8.1; IPC-8.2), PC-10 (IPC-10.1, IPC-10.2)	General questions of clinical pharmacology	 Purpose and objectives of the discipline Clinical Pharmacology. Basic concepts: pharmacodynamics(PD), pharmacokinetics (PK), pharmacotherapy (PT), etc. Clinical pharmacokinetics. The role of drug transporters in pharmacokinetic processes. Drug absorption. Distribution of drugs in the body. Drug metabolism. Elimination of drugs from the body. Basic pharmacokinetic parameters. Pharmacodynamics. Relationship between pharmacokinetics and pharmacodynamics. Clinical application of pharmacokinetic parameters. Therapeutic drug monitoring. Adverse drug reactions (ADR). Terminology of drug side effects. Epidemiology of ADR. Classification of ADR. Toxic effects. ADR caused by the pharmacological properties of drugs. Allergic reactions. Pseudoallergic reactions. Idiosyncrasy. Drug addiction. ADR diagnostics. Prevention and treatment of ADR. Methods for monitoring side effects.

			Pharmacokinetic interaction of drugs. Pharmacodynamic
			interaction of drugs. Interaction of drugs with food, tobacco,
			herbal medicines, and ethanol. Risk factors for drug interaction.
			Features of CF in pregnant women, nursing mothers, newborns,
			and the elderly.
			Clinical and pharmacological technologies of personalized
			medicine. Pharmacogenetic testing.
			Pharmacoeconomics and pharmacoepidemiology.
			Clinical studies of drugs. Evidence-based medicine.
			Fundamentals of rational pharmacotherapy. Types, goals and
			objectives, and stages of. Pharmacological history. Choice of
			medication and dosage regimen.
			The concept of a pharmacological test. Titration of the drug dose.
			Monitoring the effectiveness and safety of pharmacotherapy.
			Patient's adherence to treatment. Features of pharmacotherapy of
			urgent conditions. Features of long-term pharmacotherapy.
			Errors in evaluating the effect of the drug. Drug withdrawal.
			Combined use of medicines.
		Clinical	Features and principles of prescribing antimicrobial drugs.
			Classification of antimicrobial drugs. Mechanisms of action.
			Mechanisms of formation of resistance of microorganisms to
		drugs	antibiotics. Principles of differentiated prescribing of
			antimicrobial drugs. Spectrum and contraindications to use.
			ADR. Interaction with other drugs. Monitoring the effectiveness
			and safety of antimicrobial drug pharmacotherapy.
			beta-lactam antibiotics-indications for use, comparative
			characteristics of drugs:
	UC-1		- penicillins;
	(IUC-1.2,		- cephalosporins;
	IUC-1.3),		- carbapenems;
	GPC-7 (I		- monobactams.
	GPC -7.1;		Aminoglycosides - indications for use, comparative
	I GPC -		characteristics of drugs.
	7.2; I GPC -		Macrolides - indications for use, comparative characteristics
2			of drugs. Lincosamides - indications for use, comparative
	7.3), PC-8		Lincosamides - indications for use, comparative characteristics of drugs.
	(IPC-8.1;		Tetracyclines - indications for use, comparative
	(II C-8.1, IPC-8.2),		characteristics of drugs.
	PC-10		Chloramphenicol group - indications for use, comparative
	(IPC-10.1,		characteristics of drugs.
	(IPC-10.2)		Group of polypeptides - indications for use, comparative
	II C 10.2)		characteristics of drugs.
			Rifamycin group - indications for use, comparative
			characteristics of drugs.
			Polymyxin group - indications for use, comparative
			characteristics of drugs.
			Group of phosphonic acid derivatives-indications for use,
			characteristics.
			Features and principles of prescribing synthetic antimicrobials.
			Classifications. Mechanisms of action. Pharmacokinetic
. 1			

Interaction with other drugs. Monitoring the safety of pharmacotherapy. Quinolones of 1-4 generations, in	ne encouveness and
Quinolones of 1-4 generations, in	1
	idications for use,
comparative characteristics of drugs.	
Nitrofurans - indications for use, compa	arative characteristics
of drugs.	
Nitroimidazoles-indications for	use, comparative
characteristics of drugs.	
Quinolons - indications for use, compa	rative characteristics
of drugs.	
Sulfonamide preparations.	
Features and principles of prescribing ant	i-tuberculosis drugs
Classifications. Mechanisms of action	-
characteristics. Spectrum and contraindica	
Interaction with other drugs. Monitoring th	
	ne encenveness and
Safety of pharmacotherapy.UC-1ClinicalFeaturesandprinciplesofprescribing	a antivinal dama-
(IUC-1.2, pharmacology of Classifications. Mechanisms of action	1
IUC-1.3), antiviral and contraindications to use. ADR. Interaction	0
GPC-7 (I antifungal drugs Monitoring the effectiveness and safety of ph	
GPC -7.1; Antiherpetic drugs, indications for	use, comparative
I GPC - characteristics of drugs.	
7.2; IAnti-cytomegalovirus drugs, indications	for use, comparative
GPC - characteristics of drugs.	
7.3), Anti-influenza drugs, indications for	r use, comparative
PC-8 characteristics of drugs.	
[, (IPC-8.1; Features and principles of prescribing	antifungal drugs.
³ IPC-8.2), Classifications. Mechanisms of action	n. Spectrum and
PC-10 contraindications to use. ADR. Interaction	n with other drugs.
(IPC-10.1, Monitoring the effectiveness and safety of ph	0
Polyenes, comparative characteristics of	
for use.	0 /
Imidazoles, indications for use, compar	rative characteristics
of drugs.	
Triazoles, indications for use, comparativ	ve characteristics
Allylamines, indications for use, comparative	
Other antifungal drugs, indications for	
characteristics of drugs.	use, comparative
UC-1 Clinical system Management tactics of patients with	impaired bronchial
(IUC-1.2, pharmacology of patency in accordance with the current	-
IUC-1.3), drugs used in guidelines. Routes of delivery of drugs that	
GPC-7 (I diseases of the patency (aerosol inhaler, nebulizer, spacer, t GPC, 7.1) respiratory tract drugs that affect the branchial patency. CE	
GPC -7.1; respiratory tract drugs that affect the bronchial patency. CF	
I GPC - of drugs (classification, PD and PK by g	
4 7.2; I characteristics of drugs; indications and c	
GPC - use; ADR; interaction with other drugs;	0
7.3), different pathological conditions; monitori	ing of effectiveness
PC-8 and safety in pharmacotherapy):	
(IPC-8.1; beta-adrenostimulants,	
IPC-8.2), M-holinoblockers,	
PC-10 phosphodiesterase inhibitors,	
(IPC-10.1, Antileukotriene drugs.	

	IDC 10.2		Mast cell membrane stabilizers.
	IPC-10.2)		Mast cell membrane stabilizers. Drugs that affect inflammation in the respiratory tract (comparative characteristics of drugs; indications and contraindications for use; ADR; interaction with other drugs; kmonitoring of efficacy and safety in pharmacotherapy): Inhaled glucocorticoids, Monoclonal antibodies to IgE, phosphodiesterase IV inhibitors. Expectorant and antitussive drugs.
	UC-1	Clinical	· · · · · · · · · · · · · · · · · · ·
5	UC-1 (IUC-1.2, IUC-1.3), GPC-7 (I GPC -7.1; I GPC - 7.2; I GPC - 7.3), PC-8 (IPC-8.1; IPC-8.2), PC-10 (IPC-10.1, IPC-10.2)	pharmacology of anti- inflammatory drugs	CF of nonsteroidal anti-inflammatory drugs (NSAIDs) (scope of application, significance in modern practice, features of PD and PK, indications and contraindications for use, ADR, interactions with other drugs, monitoring the effectiveness and safety of pharmacotherapy). Classification of NSAIDs by chemical structure and mechanism of action. Mechanism of action of NSAIDs. The main pharmacological effects of NSAIDs. Indications for use of NSAIDs. Comparative characteristics of drugs. Features, including age- related, pharmacokinetics. Indications and contraindications for use. ADR, due to the peculiarities of pharmacodynamics and pharmacokinetics of NSAIDs (Reye and Vidal syndrome, etc.). Interaction with other drugs. Evaluation of efficacy and safety in pharmacotherapy. Basic, slow-acting anti-inflammatory drugs (meaning in modern practice, features of PD and PK, indications and contraindications for use, ADR, interactions with other drugs, monitoring the effectiveness and safety of pharmacotherapy). Classification. Comparative characteristics of corticosteroids: natural (cortisone, hydrocortisone), semi-synthetic (prednisone, methylprednisolone), synthetic (triamcinolone, dexamethasone,
6	UC-1 (IUC-1.2, IUC-1.3), GPC-7 (I GPC -7.1; I GPC - 7.2; I GPC - 7.3), PC-8 (IPC-8.1; IPC-8.2), PC-10 (IPC-10.1, IPC-10.2)	Clinical pharmacology of drugs used in diseases of the digestive tract	etc.). Types of corticosteroid therapy. system CF of drugs used in diseases of the digestive system. Features of PD and PK, indications and contraindications for use, ADR, interactions with other drugs, monitoring the effectiveness and safety of pharmacotherapy: drugs that reduce the activity of acid-peptic factor, Gastroprotectors, Antiemetic drugs, Enzyme preparations, Choleretic, hepatoprotective, cholelitolytic drugs, proteolysis inhibitors, drugs used for diarrhea, Laxatives Drugs, Prokinetics, drugs used for intestinal dysbiosis.
7	UC-1 (IUC-1.2, IUC-1.3), GPC-7 (I	Clinical pharmacology of drugs used in diseases of the	Clinical pharmacology of drugs that lower vascular tone. Features of PD and PK, indications and contraindications for use, ADR, interactions with other drugs, monitoring the effectiveness and safety of pharmacotherapy:

	CDC 7 1.	cardiovascular	Aconista of control advancesia recordance and II		
	GPC -7.1;		Agonists of central _{α2} -adrenergic receptors and I1 ₁ -		
	I GPC -	system	imidazoline receptors,		
	7.2; I		Sympatholytics,		
	GPC -		Ganglion		
	7.3),		blockers,α-adrenoblockers,		
	PC-8		β -adrenoblockers,		
	(IPC-8.1;		Venous vasodilators,		
	IPC-8.2),		slow calcium channel blockers,		
	PC-10		mixed-action vasodilators (sodium nitroprusside),		
	(IPC-10.1,		Arterial vasodilators,		
	IPC-10.2)		angiotensin-converting enzyme inhibitors,		
			angiotensin II receptorblockers,		
			Inhibitors of I_f -channels of the sinus node.		
			Clinical pharmacology of medicines that increase vascular tone.		
			Clinical pharmacology of antiarrhythmic drugs. The main goals		
			of antiarrhythmic treatment. General characteristics and		
			classification of antiarrhythmic drugs. Mechanisms of action of		
			antiarrhythmic drugs. ADR. Clinical pharmacology of		
			individual antiarrhythmic drugs. Monitoring the effectiveness		
			and safety of pharmacotherapy. Principles of choosing		
			antiarrhythmic drugs and treating some of the most common		
			arrhythmias.		
			Clinical pharmacology of inotropic drugs. Features of PD and		
			PK, indications and contraindications for use, ADR, interactions		
			with other drugs, monitoring the effectiveness and safety of		
			pharmacotherapy:		
			Cardiac glycosides,		
			adrenergic receptor agonists,		
			phosphodiesterase inhibitors,		
			Drugs that increase the sensitivity of contractile proteins to		
			calcium (calcium sensitizers).		
			Clinical pharmacology of diuretics (diuretics). Features of PD,		
			PK, indications and contraindications for use, ADR, interactions		
			with other drugs:		
			Carbonic anhydrase inhibitors,		
			Osmotic diuretics, Loop diuretics,		
			Thiazide and thiazide-like diuretics,		
			Aldosterone antagonists, potassium-sparing diuretics.		
			Choosing a diuretic. Monitoring of efficiency and safety.		
			Principles of substitution therapy for hypokalemia.		
	UC-1	Clinical	Clinical pharmacology of drugs that affect the hemostatic		
	(IUC-1.2,	pharmacology of	system. Classification, PD and PK, indications and		
	(IUC-1.2),	drugs that affect	contraindications for use, ADR, interactions with other drugs,		
	GPC-7 (I	the hemostatic	monitoring the effectiveness and safety of pharmacotherapy:		
	GPC -7.1;	system	Direct		
8	I GPC -	J	-acting anticoagulants, indirect		
	7.2; I		-acting anticoagulants, direct-acting		
	GPC -		procoagulants, indirect-acting procoagulants,		
	7.3),		Fibrinolytics-plasminogen activators,		
	PC-8		fibrinolysis inhibitors,		
	(IPC-8.1;		Antiplatelet agents,		

IPC-8.2),	thromboplastin formation activators,
PC-10	drugs used for hemophilia and lack of blood clotting factors.
(IPC-10.1,	
IPC-10.2)	

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

Type of educational work	Labor i	ntensity	Labor intensity (AH) in semesters
	volume in	volume in	
	credit units		12 semester
	(CU)	hours (AH)	
Classroom work, including	1,83	66	66
Lectures (L)	0,39	14	14
Laboratory practicum (LP)*	Not provided	d	
Practicals (P)	1,44	52	52
Seminars (S)	Not provided	t	
Student's individual work (SIW)	1,17	42	42
Mid-term assessment			
credit	In the last cl	ass structure	
TOTAL LABOR INTENSITY	3	108	108

6. Content of the academic discipline

N⁰	Name of the section of the	21		es of acaden	nic work* ((in AH)	
	academic discipline	L	LP	Р	S	SIW	total
1	General questions of clinical pharmacology	6	-	5	-	4	15
2	Clinical pharmacology of antimicrobial drugs	2	-	5	-	4	11
3	Clinical pharmacology of antiviral and antifungal drugs	-	-	5	-	3	8
4	Clinical pharmacology of drugs used in diseases of the respiratory tract	2	-	5	-	6	13
5	Clinical pharmacology of anti-inflammatory drugs	-	-	5	-	6	11
6	Clinical pharmacology of drugs used in diseases of the digestive tract	2	-	5	-	5	12
7	Clinical pharmacology of drugs used in diseases of the cardiovascular system	2	-	10	-	10	22
8	Clinical pharmacology of drugs that affect the hemostatic system			5	-	4	9
9	Project presentation. Credit			7	-	-	7
	TOTAL	14	-	52	-	42	108

6.1. Sections of the discipline and types of academic work

* - L – lectures; LP – laboratory practicum; P – practicals; S – seminars; SIW – student's individual work.

6.2. Thematic schedule of educational work types: 6.2.1 Thematic schedule of lectures

	.2.1 I nematic schedule of lectures	
N⁰	Name of lecture topics	Volume in
		AH
		12 semester
1.	General questions of clinical pharmacology	2
2.	Adverse drug reactions	2
3.	Personalized pharmacotherapy. Pharmacogenetics	2
4.	Clinical pharmacology of antimicrobial drugs	2
5.	Clinical pharmacology of drugs used in diseases of the respiratory tract	2
6.	Clinical pharmacology of drugs used in diseases of the digestive tract	2
7.	Clinical pharmacology of drugs used in diseases of the cardiovascular	2
	system	
	TOTAL (total – 14 AH)	14

6.2.2. The thematic plan of laboratory practicums- not provided

6.2.3. Thematic plan of practicals

N⁰	Name of laboratory practicums	Volume in AH 12 semester
1.	General questions of clinical pharmacology	5
2.	Clinical pharmacology of antimicrobial drugs	5
3.	Clinical pharmacology of antiviral and antifungal drugs	5
4.	Clinical pharmacology of drugs used in diseases of the respiratory tract	5
5.	Clinical pharmacology of anti-inflammatory drugs	5
6.	Clinical pharmacology of drugs used in diseases of the digestive tract	5
7.	Clinical pharmacology of drugs used in diseases of the cardiovascular system	5
8.	Clinical pharmacology of drugs used in diseases of the cardiovascular system. Continued	5
9.	Clinical pharmacology of drugs that affect the hemostatic system	5
10.	Project presentation. Credit	7
	TOTAL (total - 52AH)	52

6.2.4. Thematic plan of seminars – not provided

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

N⁰	Name of laboratory practicums	Volume in AH
		12 semester
1.	Working with literature sources; completing the Protocol for evaluating	4
	the effectiveness and safety of pharmacotherapy; working with	
	electronic educational resources (SDS, EBS, etc.).	
	Presentation of a project on the topic: "Monitoring the effectiveness and	
	safety of pharmacotherapy".	
2.	Working with literature sources; completing the Protocol for evaluating	4
	the effectiveness and safety of pharmacotherapy; working with	
	electronic educational resources (SDS, EBS, etc.).	

r		
	Presentation of a project on the topic: "Clinical pharmacology of	
	penicillins used in the treatment of respiratory diseases".	
3.	Work with literature sources; filling out the Protocol for evaluating the effectiveness and safety of pharmacotherapy; work with electronic	3
	educational resources (SDS, EBS, etc.).	
	<i>Presentation of a project</i> on the topic: "Clinical pharmacology of drugs	
	used in the treatment of dermatomycosis"	
4.	system Work with literature sources; filling out the Protocol for	6
	evaluating the effectiveness and safety of pharmacotherapy; work with	
	electronic educational resources (SDS, EBS, etc.).	
	<i>Presentation of a project</i> on the topic: "Clinical pharmacology of drugs used in the treatment of COPD".	
5.	Work with literature sources; filling out the Protocol for evaluating the	6
	effectiveness and safety of pharmacotherapy; work with electronic	
	educational resources (SDS, EBS, etc.).	
	Presentation of a project on the topic: "Clinical pharmacology of	
	glucocorticosteroid preparations used in the treatment of emergency	
	conditions".	
6.	Work with literature sources; filling out the Protocol for evaluating the	5
	effectiveness and safety of pharmacotherapy; work with electronic	
	educational resources (SDS, EBS, etc.).	
7.	Working with literature sources; completing the Protocol for evaluating	10
	the effectiveness and safety of pharmacotherapy; working with	
	electronic educational resources (SDS, EBS, etc.).	
	<i>Presentation of a project</i> on the following topics:	
	- "Clinical pharmacology of cardiotonic agents",	
	- "Clinical pharmacology of diuretics used in the treatment of	
	hypertension".	
8.	Work with literature sources; filling out the Protocol for evaluating the	4
	effectiveness and safety of pharmacotherapy; work with electronic	
	educational resources (SDS, EBS, etc.).	
	<i>Presentation of a project</i> on the topic: "Clinical pharmacology of fibrin-	
	and antifibrinolytic agents".	
9.	TOTAL (total - 42AH)	42

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

N⁰	Nº a		Name of the discipline		Eva
n /	Semester	No. Control forms	section	types	num
1.	12	DACKOTPr.A-credit at the	General questions CF	Test tasks	
		end of the 12th semester		Control questions	
				Project	
				Situational tasks	
2.	12	• DAC • KOT	of the CF antimicrobial drugs	Test tasks	
		• Pr.A-credit at the end of the 12th		Control questions	
				Project	

		semester		Situational tasks	
3.	12	• DAC	of the CF of antiviral and	Test tasks	
		• KOT	antifungal drugs		
		• Pr.A-credit at the		Control questions	
		end of the 12th		Project	
		semester		Situational tasks	
4.	12	• DAC	of the CP of drugs used for	Test tasks	
		• KOT	respiratory diseases		
		• Pr.A-credit at the		Control questions	
		end of the 12th		Project	
		semester		Situational tasks	
5.	12	• DAC	CF anti-inflammatory	Test tasks	
		• KOT	drugs		
		• Pr.A-credit at the		Control questions	
		end of the 12th		Project	
		semester		Situational tasks	
	10				
6.	12	• DAC	of the CF of drugs used in	system Test tasks	
		• KOT	diseases of the digestive		
		• Pr.A-credit at the		Control questions	
		end of the 12th		Situational tasks	
7	12	semester	of the CD of dress and in	Tract to also	
7.	12	• DAC	of the CP of drugs used in diseases of the	Test tasks	
		• KOT	cardiovascular system	Control questions	
		• Pr.A-credit at the end of the 12th	cardiovascular system	Project	
		semester		Situational tasks	
8.	12	• DAC	of CF of drugs affecting the	Test tasks	
0.	12	• DAC • KOT	hemostasis system	i est tasks	
		• Pr.A-credit at the	nemostasis system	Control questions	
		• Pr.A-credit at the end of the 12th		Project	
		semester		Situational tasks	
9.	12	Intermediate	Project protection. Test	Project	
).	12	assessment (Credit)		Test tickets	
1	1	assessment (croun)		i obt tieneto	

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

N⁰	Name according to bibliographic requirements	Number of copies	
		at the department	in the library
1	Сlinical pharmacology of antibacterial drugs : textbook for 6th year- students of the foreign students faculty / M. V. Stolbova, I. S. Mitrofanova, T. V. Chernysheva [и др.] ; Stolbova M. V.,Mitrofanova I. S.,Chernysheva T. V.,Liskova Y. V.,Tenchurina L. R. – Оренбург : ОрГМУ, 2020. – 108 с. – Текст : электронный. – URL: https://e.lanbook.com/book/257978 (дата обращения: 01.12.2022. – Режим доступа: по подписке.	http://nbk.pimunn.net	афическое описание: /MegaPro/UserEntry? c&id=230963&idb=0
2	Clinical implementation of drug interactions: tutorial. / edited by associate professor Sorokina Yu.A. PhD. – N. Novgorod: Publishng house «Medial», 2021. – 120 p.	10	00

	8.2. Further reading		
N⁰	Name according to bibliographic requirements	Number of copies	
		at the department	in the library
1	Bennett, P. N. Clinical pharmacology / P. N. Bennett, M. J. Brown, P. Sharma. – 11 tx ed. – Edinburgh : Churchill Livingstone, 2012. – XI, 667 p. – ISBN 9780808924319.	http://nbk.pimunn.net	афическое описание: /MegaPro/UserEntry? c&id=163900&idb=0
2	Grahame-Smith, D. G. Oxford textbook of clinical pharmacology and drug therapy / D. G. Grahame-Smith, J. K. Aronson ; Grahame-Smith, D. G. ; Aronson, J. K. – 3rd ed. – Oxford University Press, 2002. – 641 с. : мяг. – ISBN 0-19-850944-8.	http://nbk.pimunn.net	афическое описание: /MegaPro/UserEntry? oc&id=23432&idb=0

8.3. Electronic educational resources for tea	aching academic subjects
---	--------------------------

0.0. 2.000			mg araarin	• • • • • • • • • • •
8.3.1. Interna	l Electronic Libr	arv System of th	ne University	(IELSU)

8.5.1. Internal Electronic Library Syst			Marchan
Name of the electronic	Brief	Access conditions	Number
resource	description		of users
	(content)		
Internal Electronic Library	Works of the	From any computer and mobile	Not
System (EBS)	university's	device using an individual login	restricted
http://nbk.pimunn.net/MegaPro/Web	teaching staff:	and password.	
	textbooks,	Access mode:	
	study guides,	http://nbk.pimunn.net/MegaPro/Web	
	problem		
	collections,		
	methodological		
	manuals,		
	laboratory		
	works,		
	monographs,		
	collections of		
	scientific		
	papers,		
	scientific		
	articles,		
	dissertations,		
	dissertation		
	abstracts,		
	patents		

832 Electronic	educational resource	s acquired by th	e University
0.5.2. Electronic	educational resource	s acquired by in	

N⁰	Name of the electronic resource	Brief description (content)	Access conditions	Number of users
	EBS "Student's Consultant "(Electronic database "Student's Consultant". Database "Medicine.	Educational literature, additional materials (audio, video, interactive materials, test tasks) for higher medical and	From any computer and mobile device using an individual	unlimited

Healthcare (VO) and " Medicine. Healthcare (SPE)") <u>http://www.studmedlib.ru</u> Database '' Doctor's	pharmaceutical education	username and password. Access mode: http://nbk.pimunn .net/MegaPro/We b From any	unlimited
Consultant. Electronic Medical Library'' https://www.rosmedlib.ru	clinical guidelines, training manuals, monographs, atlases, pharmaceutical reference books, audio and video materials, ICD-10 and ATX	computer and mobile device using an individual login and password. Access mode: <u>http://nbk.pimunn</u> <u>.net/MegaPro/We</u> <u>b</u>	
Electronic library system ''Bookup'' https://www.books-up.ru	Educational and scientific medical literature of Russian publishing houses, including translations of foreign publications. Within the framework of the "Big Medical Library" project, publications of participating universities are available	from any computer and mobile device using an individual login and password; access is automatic from university computers. Publications from the "My books" section are available for reading. Access mode: <u>http://nbk.pimunn</u> .net/MegaPro/We b	unlimited
URAIT Educational Platform https://urait.ru	https://urait.ru A collection of publications on psychology, ethics, and conflict	management from any computer or mobile device using an individual username and password. Access mode: <u>http://nbk.pimunn</u> .net/MegaPro/We b	unlimited
Electronic periodicalsin the database "Scientific ElectronicLibrary eLibraryhttps://elibrary.ru	Electronic medical journals	From university computers. Access mode: <u>https://elibrary.ru</u>	unlimited

Integrated Information	Electronic copies of	Access using an	unlimited
and library system	scientific and	individual	
(IBS) of the scientific	educational publications	username and	
and educational	from the collections of	password from	
medical cluster of the	libraries participating in	any computer or	
Volga Federal District	the scientific and	mobile device.	
– "Srednevolzhsky"	educational medical	Access mode:	
(contract on a free basis)	cluster of the Volga	websites of	
	Federal District	libraries	
	"Srednevolzhsky"	participating in	
		the project	
Electronic reference	Regulatory documents	From the	unlimited
and legal system	regulating the activities	computers of the	
"Consultant Plus	of medical and	scientific	
"(contract on a free	pharmaceutical	library.	
basis)	institutions	Access mode:	
http://www.consultant.ru		http://www.consul	
		tant.ru/He	
National Electronic	Electronic copies of	Scientific and	unlimited
Library (NEB) (contract	publications	educational	
on a free basis)	(including scientific and	works that have	
<u>http://нэб.рф</u>	educational ones)	not been	
	on a wide range of	reprinted in the	
	knowledge	last 10 years are	
		publicly	
		available.	
		Works restricted	
		by copyright –	
		from the	
		computers of the	
		scientific	
		library.	
		Access mode:	
		<u>http://нэб.рф</u>	

8.3.3 Open access resources

No	Name of the electronic resource	Brief description (content)	Access conditions	
JN⊡	Nume of the electronic resource	Brief description (content)	Access conditions	
	PubMed	Search engine of the	From any computer or	
	https://www.ncbi.nlm.nihgov/p	National Library of Medicine	mobile device.	
	ubmed	of the USA for the databases	Access mode:	
		"Medline", "PreMedline"	https://www.ncbi.nlm.nihgov/p	
			<u>ubmed</u>	
	Directory of Open Access	Directory for open access to	from any computer or mobile	
	Journals	a full-text collection of	device.	
	http://www.doaj.org	periodicals	Access mode:	
			http://www.doaj.org	
	Directory of open access	A directory of open access to	from any computer or mobile	
	books (DOAB)	a full-text collection of	device. Access mode:	
	http://www.doabooks.org	scientific books	http://www.doabooks.org	

9. Material and technical support for mastering an academic discipline

9.1. List of premises for classroom activities for the discipline

For conducting lectures on the basis of the academic building No. 2 (BFK), there are: - 2 lecture halls.

For conducting practical classes on the basis of the educational building No. 2 (BFK), there are:

- 6 study rooms with an area of 36,8, 26, 23,6, 21,2, 21,2, 21 m².

9.2. List of equipment for classroom activities for the discipline

Name	quantity
Based on academic building No. 2:	
Multimedia projectors:	
- Epson EMP-S3	1
-Epson	1
-BEAQMS	1
Laptops:	
- Fujitsu Siemens	1
- Lenovo	1
- Lenovo Idea Pad	1
- Lenovo Think Book	2
LCD TV	4
Screens	3
Whiteboards	5
Marker boards	4
Stands:	
- on the organization of the educational process at the department	1
-pharmacodynamics and pharmacokinetics of medicines	16

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

	Software	number	Type of software	Manufacture	Number in	Contract No.
Ite		of		r	the unified	and date
m		licenses			register of	
no.					Russian	
					software	
1	Wtware	100	Thin Client	Kovalev	1960	2471/05-18
			Operating System	Andrey		from
				Alexandrovic		28.05.2018
				h		
2	MyOffice is	220	Office Application	LLC "NEW	283	without
	Standard. A			CLOUD		limitation,
	corporate user			TECHNOLO		with the right
	license for			GIES"		to receive
	educational					updates for 1
	organizations,					year.
	with no					
	expiration date,					
	with the right to					
	receive updates					
	for 1 year.					
3	LibreOffice		Office Application	The	Freely	
				Document	distributed	
				Foundation	software	

4	Windows 10 Education	700	Operating systems	Microsoft	Azure Dev Tools for Teaching Subscriptio n	
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

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 NAME OF THE ACADEMIC DISCIPLINE

Field of study / specialty / scientific specialty:

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				

_20___

Approved at the department meeting Protocol No. _____of _____

Head of the Department

department name, academic title

signature

print name

(code, name)