

Summary of the working program of the academic discipline

«Clinical pharmacology»

General Educational Program of higher education (specialist's degree programs)

31.05.01 General Medicine

Department: _____ General and clinical pharmacology _____

1. The purpose of mastering the discipline *participation in the formation of relevant competencies:* 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)

2. Position of the academic discipline in the structure of the General Educational Program (GEP).

2.1. The discipline refers to the core part of Block 1 of GEP HE

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

Mastering the discipline aims at acquiring the following universal (UC) and general professional (GPC) 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 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; developing action strategies for solving professional problems	<ul style="list-style-type: none"> • General laws of the pharmacokinetics and pharmacodynamics of drugs (PK AND PD); • PK AND PD belonging to certain pharmacological group, pharmacodynamics and pharmacokinetics of drugs, indications, side effects, contraindications 	<ul style="list-style-type: none"> • to define groups of drugs for the treatment of a certain disease; • to analyze the effect of drugs on the totality of their pharmacological properties and the ability to use drugs for therapeutic treatment of the adult population; to predict and evaluate adverse drug reaction 	<ul style="list-style-type: none"> • skills prescription of a drug for the treatment of various diseases and pathological processes in the adult population
2.	GPC-7	IGPC 7.1. Knows methods of medical	• methods of medical treatment; groups of	• gain new knowledge	practical experience:	• methods of medical

	<p>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</p> <p>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; 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.</p> <p>IGPC -7.3. Has practical experience in the development of the treatment plan of patients with the most common diseases in accordance with the applicable procedures of medical care, clinical guidelines, the standards of medical care; medical care in emergency patients with the most common diseases, in accordance with the applicable procedures of medical care, clinical guidelines, the standards of medical care; selecting and prescribing to patients</p>	<p>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;</p> <ul style="list-style-type: none"> • the possibility of reference and information systems and professional databases; <p>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.</p>	<p>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;</p> <ul style="list-style-type: none"> • develop a treatment plan for patients with the most common diseases in accordance with the procedures for providing medical care, clinical recommendations, and taking into account the standards of medical care to 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 medications; • to make a 	<ul style="list-style-type: none"> • developing a treatment plan for patients with the most common diseases in accordance with the current medical care procedures, clinical recommendations, 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; • prevention and treatment of complications, side effects, and side effects. actions, adverse reactions, including unforeseen ones that 	<p>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;</p> <ul style="list-style-type: none"> • 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,
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		with the most common diseases in accordance with the applicable procedures of medical care, clinical guidelines, the standards of medical care; evaluation of the efficacy and safety of the use of drugs in patients with the most common diseases; prevention and treatment of complications, side effects, adverse reactions, including emergency resulting from diagnostic or therapeutic procedures, the use of drugs; the provision of medical care to patients with sudden acute diseases, conditions, exacerbation of chronic diseases without obvious signs of threatening the life of the patient in the emergency form; the use of drugs in the provision of medical care in the emergency form		treatment plan for the disease and the patient's condition, taking into account the diagnosis, age of the patient, the clinical picture of the disease in accordance with the current medical care procedures, clinical recommendations (treatment protocols 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 based on the standards of medical care; evaluate the effectiveness and safety of the use of medicines.	have occurred as a result of the use of medicines; <ul style="list-style-type: none"> • the use of medicines in the provision of medical care in an emergency form. 	indications and contraindications for their use; complications caused by their use.
3.	PC-8	<u>Able</u> to develop a plan of treatment for the disease or condition and <u>to prescribe medications</u> , medical	IPC-8.1. Knows: modern methods of using medicines for diseases and conditions in the	• methods of drug treatment; groups of drugs used to	• gain new knowledge based on analysis, synthesis,	• methods of drug treatment; groups of drugs used to

	<p>products, health food and non-pharmacological treatment according to diagnosis, age and clinical presentation <u>in accordance with the applicable procedures of medical care, clinical recommendations</u> (treatment protocols) <u>on the provision of medical assistance, taking into account standards to assess the effectiveness and safety of the use of medicines</u>, medical devices, therapeutic nutrition and other methods of treatment</p>	<p>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 medical care; mechanism of action of medicinal products, medical indications and contraindications to their use; complications caused by their use IPC-8.2. Can: make a treatment plan for the disease and the patient's condition, taking into account the diagnosis, age of the patient, clinical picture of the disease in accordance with the current procedures for providing medical care, clinical recommendations (treatment protocols) on medical care, taking into account the standards of medical care; prescribe medications, taking into account the diagnosis, age and clinical picture of the disease in accordance with current procedures for the provision of medical care, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care; evaluate the effectiveness and safety of the use of medicines.</p>	<p>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; • the capabilities of reference and information systems and professional databases; modern methods use of medicinal products 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</p>	<p>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, and taking into account the standards of medical care to prevent or eliminate complications, side effects, undesirable reactions, including unforeseen ones, that have occurred as a result of diagnostic or therapeutic</p>	<p>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; • the capabilities of reference and information systems and professional databases; modern methods use of medicinal products 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</p>
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				<p>the standards of medical care; the mechanism of action of medicinal products, indications and contraindications to their use; complications caused by their use.</p>	<p>manipulations, the use of medications ;</p> <ul style="list-style-type: none"> • to make a treatment plan for the disease and the patient's condition, taking into account the diagnosis, age of the patient, the clinical picture of the disease in accordance with the current medical care procedures, clinical recommendations (treatment protocols 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 	<p>action of medicinal products, indications and contraindications to their use; complications caused by their use.</p>
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					care based on the standards of medical care; evaluate the effectiveness and safety of the use of medicines.	
4.	PC-10	<u>able to organize personalized treatment of patients, including pregnant women, elderly and senile patients, and evaluate the effectiveness and safety</u>	<p>IPC-10. Knows: 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, medical indications and contraindications to their use; complications caused by their use.</p> <p>IPC-10.2. Is able to: 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 the use of medicines.</p>	<ul style="list-style-type: none"> • 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; • the capabilities of reference and information systems and professional databases; modern methods use of medicinal products for diseases and conditions of 	<ul style="list-style-type: none"> • 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, and taking into account the standards of medical care to 	<ul style="list-style-type: none"> • practical experience: • developing a treatment plan for patients with the most common diseases in accordance with the current medical care procedures, clinical recommendations, 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; • prevention and treatment of complications, side effects, and side

				<p>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 medicinal products, indications and contraindications to their use; complications caused by their use.</p>	<p>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 medications ;</p> <ul style="list-style-type: none"> • to make a treatment plan for the disease and the patient's condition, taking into account the diagnosis, age of the patient, the clinical picture of the disease in accordance with the current medical care procedures, clinical recommendations (treatment protocols) on issues related to the provision of medical care, taking into account the standards of medical 	<p>effects. actions, adverse reactions, including unforeseen ones that have occurred as a result of the use of medicines;</p> <ul style="list-style-type: none"> • the use of medicines in the provision of medical care in an emergency form.
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					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.	
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4. Volume of the academic discipline and types of academic work

Total labor intensity of the discipline is 3 CU (108 AH)

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

5. Sections of the academic discipline and competencies that are formed

№	Competence code	Section name of the discipline
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
2.	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 antimicrobial drugs
3.	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 antiviral and antifungal drugs
4.	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 respiratory tract
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)	Clinical pharmacology of anti-inflammatory drugs
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
7.	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 cardiovascular system
8.	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 that affect the hemostatic system