

**MINISTRY OF EDUCATION AND SCIENCE OF THE RUSSIAN FEDERATION,
MINISTRY OF EDUCATION AND SCIENCE OF THE KYRGYZ REPUBLIC**

**Government-run Educational Institution of Higher Professional Education
Kyrgyz-Russian Slavic University
School of Medicine**



Pharmacology

Course Outline (Module)

Assigned to Basic and Clinical Pharmacology
Academic Curriculum plan 31050151_15_14TF.pli.xml
31.05.01. Therapeutics

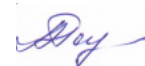
Mode of Study **full time**
Total Credit Value **___7__ credit points**

Course Hours 252
including:
in-class learning 162
individual work 72

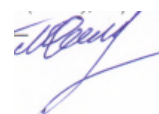
Scope of Testing Semesters:
exams 18
credits 5

Course Hours Scheduling (per semester)						
Semester Academic Year	1 (1.1)		2 (1.2)		Total	
Weeks	18,7		18			
Type of Training	AC	CO	AC	CO	AC	CO
Lectures	36	36	36	36	72	72
Practical Session	54	54	36	36	90	90
Including Interactive Session	6	6	6	6	12	12
Total In-class Session	90	90	72	72	162	162
Individual Work Assessment	54	54	18	18	72	72
Face-to-face Learning	90	90	72	72	162	162
Individual Work			18	18	18	18
Total	144	144	108	108	252	252

The Course outline developed by Associate Professor, Ph.D. Zurdinova AA, Associate Professor. Ph.D. Sharaeva A.T.



Reviewers: Associate Professor, Ph.D. Toktogulova N.A., Associate Professor. Ph.D. Moldoisaeva S.R.



The Course Outline
Pharmacology

developed in full compliance with FSES 3+:

Federal State Education Standards of Higher Professional Education for students trained for specialty “General practice”
(The Ministry of Education and Science of the Russian Order of “09” February 2016 № 95)

in accordance with Academic Curriculum: 31.05.01 General Medicine

confirmed by KRSU Board of Academics in “29.09.2016” record №2.

The Course Outline endorsed by Basic and Clinical Pharmacology Department Meeting

Record of 11 October 2015. №5

Valid for: 2015-2021 academic year

The Head Basic and Clinical Pharmacology Department Zurdinova A.A.



The course outline endorsed for the following academic year

Chairman of the Educational and Methodological Board

16 November 2016 г.



The course outline has been revised, considered and endorsed for implementation in 2016-2017 Academic Year at the Staff Meeting of _ Basic and Clinical Pharmacology Department

Record of 22 October 2016 г. . № 3

The Head of Department Basic and Clinical Pharmacology Department: Zurdinova A.A.



The course outline endorsed for the following academic year

Chairman of the Educational and Methodological Board

15 December 2017 г.



The course outline has been revised, considered and endorsed for implementation in 2017-2018 Academic Year at the Staff Meeting of __ Basic and Clinical Pharmacology Department

Record of 14 October 2017. № 3

The Head of Department Basic and Clinical Pharmacology Department: Zurdinova A.A.



The course outline endorsed for the following academic year

Chairman of the Educational and Methodological Board

7 December 2018



The course outline has been revised, considered and endorsed for implementation in 2018-2019 Academic Year at the Staff Meeting of Basic and Clinical Pharmacology Department

Record of 1 September 2018 № 2

The Head of Department Basic and Clinical Pharmacology Department: Zurdinova A.A.



The course outline endorsed for the following academic year

Chairman of the Educational and Methodological Board

4 September 2019



The course outline has been revised, considered and endorsed for implementation in 2019-2020 Academic Year at the Staff Meeting of Basic and Clinical Pharmacology Department

Record of 28 August 2019 . №1

The Head of Department Basic and Clinical Pharmacology Department: Zurdinova A.A.



The course outline endorsed for the following academic year

Chairman of the Educational and Methodological Board

23 September 2020



The course outline has been revised, considered and endorsed for implementation in 2020-2021 Academic Year at the Staff Meeting of Basic and Clinical Pharmacology Department

Record of 25 August 2020. № 1

The Head of Department Basic and Clinical Pharmacology Department: Zurdinova A.A.



The course outline endorsed for the following academic year

Chairman of the Educational and Methodological Board

9 September 2021



The course outline has been revised, considered and endorsed for implementation in 2020-2021 Academic Year at the Staff Meeting of Basic and Clinical Pharmacology Department

Record of 27 August 2020 . № 1

The Head of Department Basic and Clinical Pharmacology Department: Zurdinova A.A.



1. COURSE OUTLINE OBJECTIVES

Studying of classifications of medicines, formation at students of skill of competent selection. The most effective and safe medicines according to their pharmacodynamic and pharmacokinetic characteristics, drug interactions; alertness to undesirable drug reactions for a given pathology and elimination of the consequences of these reactions; training of students in the methodology of mastering knowledge on pharmacology using scientific, reference literature, official statistical surveys, Internet resources and evidence-based principles; basics prescription document circulation and rules for writing prescriptions for medicines; Special attention is given to the formular system, the international non-proprietary (generic) named medicines.

2. PLACE OF THE COURSE IN THE EDUCATIONAL PROGRAM

Educational Program

Units:

2.1 Students' Preliminary Training Requirements:

2.1.1 Biochemistry

2.1.2 Pathophysiology, clinical pathophysiology

2.1.3 Latin language

2.1.4 Anatomy

2.2 Course Units and Practical Sessions imposing the prior Proficiency

2.2.1 Pharmacoeconomics

2.2.2 Pharmacoepidemiology

2.2.3 Clinical Pharmacology

2.2.4 Evidence-Based Medicine

3. STUDENTS' COMPETENCIES RESULTING FROM THE COURSE UNIT (MODULE)

Knowledge:

Level 1

general pharmacology, the concept of pharmacodynamics: the basic principles of the action of drugs, the concept of specific receptors, agonists and antagonists, pharmacological effects. Kinds action of medicines: local, resorptive, reflex;
pharmacokinetics of drugs: factors affecting the pharmacokinetics of medicinal products means. Physicochemical properties of drugs, the importance of lipophilicity, polarity, the degree of dissociation, the concept of bioavailability, the processes of absorption, distribution, communication with proteins,
volume of distribution, metabolism and excretion of drugs;
types of doses: average and highest therapeutic dose, single, daily, course, toxic doses, latitude therapeutic action;
international non-proprietary names of medicines;
types of dosage forms (solid, soft, liquid);
general principles of prescription and preparation of prescription medicines;
use of the Latin language;
Common abbreviations and symbols;
rules for storing and prescribing medicines;
international non-proprietary names of medicinal products;
the main side effects of drugs; side effects of allergic and non-allergic nature, idiosyncrasy, toxic effects of drugs, teratogenicity, embryotoxicity.

Level 2

classification of drugs that affect the functions of peripheral and central nervous systems, the mechanism of action and pharmacological effects of these agents, indications for use and major side effects.
Classification of medicines affecting the function of executive bodies and processes tissue exchange, mechanism of action and pharmacological effects, indications for use and basic side effects;
classification of anti-inflammatory, antiallergic, chemotherapeutic and immunotropic drugs, the mechanism of action and pharmacological effects, indications for use and the main side effects of the groups;
sources of medical information about medicines;
design of clinical research, classification of research;
Methodological tools of pharmacoepidemiology as the basis for obtaining information on use, efficacy and safety of drugs,
theoretical bases of drug statistics and methods of theoretical and experimental, clinical, pharmacoepidemiological and pharmacoeconomic studies.

Level 3

types of pharmacotherapy, the goals of the treatment;

	<p>types of drug interactions; classification of side effects by type, the Naranjo scale; principles of rational use of medicines; principles for selecting medicines for rational use of medicines, criteria for their selection; principles of informing, instructing, warning about the use of medicines; principles of monitoring the effectiveness and safety of pharmacotherapy.</p>
Skills:	
Level 1	<ul style="list-style-type: none"> · make prescription prescriptions of medicines. · prescribing prescriptions for specific medications; · control the correctness of prescription of medical prescriptions.
Level 2	<ul style="list-style-type: none"> · determine the location of the medicinal product in the classification of medicinal products; · distribute medicines by pharmacological groups; · determine the mechanism and principle of action of drugs from different pharmacological groups; · list pharmacological effects and indications for the use of drugs from different pharmacological groups; · identify the types of side effects and complications associated with the use of medicines; · use international non-proprietary names of medicines; · prescribing prescriptions for specific medicines under this section; · search for problematic issues of pharmacology, using various sources of information.
Level 3	<ul style="list-style-type: none"> · analyze the effect of drugs depending on pharmacodynamics and pharmacokinetics; · evaluate the interaction of medicines; · determine the cause-effect relationship in the development of unwanted adverse reactions; · make steps when choosing a Personal Group and Personal preparation; · analyze data on the effectiveness and safety of the use of medicines; · monitor the ongoing treatment; · use international non-proprietary names of medicines; · prescribing prescriptions for specific medicines; · Comprehensively evaluate the feasibility of using medical technologies, of various types pharmacotherapy in connection with the evaluation of the consequences (outcomes) and cost of medical interventions; · compare costs and analyze the relationship between costs and results.
Expertise:	
Level 1	<ul style="list-style-type: none"> · Latin; · the skills of prescribing medicines in certain pathological conditions.
Level 2	<p>Latin;</p> <ul style="list-style-type: none"> · international non-proprietary names of medicinal products; · Skills of registration of prescriptions and preparation of prescription prescriptions of medicines; · skills in the design of the Personal Form of Student Medicines; · the skills of interpreting the obtained data from different medical sources; · Methods for evaluating the use of medicines in different populations; · understanding the anatomical therapeutic chemical classification of medicines; · skills in working with computer programs; · methods of drug statistics ..
Level 3	<ul style="list-style-type: none"> • the skills of choosing a Personal group and a Personal drug for various diseases; • methods of calculating the dose of the drug and the course of treatment, depending on the age, the function of the eliminating bodies; • skills in interpreting data on the pharmacokinetics of medicines; • Skills of registration of the "yellow" card for side effects; • methods of calculating the costs necessary to achieve the desired efficiency and safety medical interventions; • apply the acquired knowledge in practice.

Final Students' Competences

3.1.1	Knowledge:
3.1.2	General pharmacology, the concept of pharmacodynamics and pharmacokinetics;
3.1.3	Types of dosage forms;
3.1.4	International non-proprietary names of medicines;
3.1.5	The main side effects of drugs;
3.1.6	General principles of registration of prescriptions and preparation of prescription drugs;
3.1.7	The use of Latin.
3.1.8	Classification of medicines affecting the functions of the PNS, CNS, executive organs and

3.1.9	processes of tissue metabolism;
3.1.10	Classification of anti-inflammatory, antiallergic, chemotherapeutic agents;
3.1.11	Characteristics of the main drug groups;
3.1.12	Pharmacodynamics and pharmacokinetics of drugs affecting the function of PNS, CNS, executive organs and processes of
3.1.13	Pharmacodynamics and pharmacokinetics of anti-inflammatory, antiallergic, chemotherapeutic
3.1.14	means;
3.1.15	Indications for use of drug data;
3.1.16	The main side effects of these drugs.
3.1.17	Common abbreviations and notation;
3.1.18	Rules for storage and prescribing of drugs.
3.2	Уметь:
3.2.1	Skills:
3.2.2	Determine the mechanism and principle of action of drugs.
3.2.3	List the pharmacological effects and indications for the use of medicines.
3.2.4	Write prescriptions for specific medications.
3.2.5	To distribute medicines by pharmacological groups, to determine the place of drugs in the classification of drugs.
3.2.6	Analyze the effect of drugs depending on pharmacodynamics and pharmacokinetics
3.2.7	To control the correctness of prescription of medical prescriptions.
3.2.8	Use international non-proprietary names of medicinal products.
3.3	Владеть:
3.3.1	Expertise:
3.3.2	Latin
3.3.3	Use of international non-proprietary names of medicinal products.
3.3.4	Registration of prescriptions and preparation of prescription medicines.
3.3.5	Registration of the Personal Form of Student Medicines.
3.1.1	Knowledge:
3.1.2	General pharmacology, the concept of pharmacodynamics and pharmacokinetics;
3.1.3	Types of dosage forms;
3.1.4	International non-proprietary names of medicines;
3.1.5	The main side effects of drugs;
3.1.6	General principles of registration of prescriptions and preparation of prescription drugs;

4. COURSE (MODULE) STRUCTURE AND CONTENT

Class Code	Subject Name /Type of Class/	Semester / Academic Year	Hours	Competencies	Literature	Interactive Sessions	Notes
1.1	Solid dosage forms /Пп/	5	3	ОПК-8	Л1.1 Л1.3 Л3.3	1	
1.2	Semisolid dosage forms /Пп/	5	3	ОПК-8	Л1.1 Л1.3 Л3.3	1	
1.3	Liquid dosage forms /Пп/	5	3	ОПК-8	Л1.1 Л1.3 Л3.3	1	
1.4	Independent work on the section "General Recipe" /Cp/	5	12	ОПК-8	Л1.1 Л1.3 Л3.3	0	Preparation for control work on section "The total recipe", writing out of various forms

								medicinal funds in recipes, calculations for number of medicinal substances
2	Раздел 2. Section 2. General pharmacology							
2.1	Introduction to pharmacology. History pharmacology. Problems of modern pharmacology /Лек/	5	2	ОПК-8	Л1.1 Л1.3 Л3.3 Э1 Э2	0		
2.2	General pharmacology: pharmacodynamics and pharmacokinetics /Лек/	5	2	ОПК-8	Л1.1 Л1.3 Л3.3 Э1 Э2	0		
2.3	Side effects of drugs. /Лек/	5	2	ОПК-8	Л1.1 Л1.3 Л3.3 Э1 Э2	0		
2.4	Introduction to the recipe, its structure, rules of compilation prescription. Pharmacopoeia. Measures of weight and volume of. /Лек/	5	2	ОПК-8	Л1.1 Л1.3 Л3.3 Э1 Э2	0		
2.5	General pharmacology: pharmacodynamics and pharmacokinetics /Пр/	5	3	ОПК-8	Л1.1 Л1.3 Л3.3 Э1 Э2	0		
2.6	Side effects of drugs. /Пр/	5	3		Л1.1 Л1.3 Л3.3 Э1 Э2	3		
2.7	Independent work on the section "General pharmacology" /Ср/	5	12	ОПК-8	Л1.1 Л1.3 Л3.3 Э1 Э2	0	Preparation for the colloquium on section "The total pharmacology.	
	Раздел 3. Section 3. Drugs, affecting peripheral nervous system							
3.1	Drugs, affecting afferent innervation. /Лек/	5	2	ОПК-8	Л1.2 Л1.3 Л2.1 Л3.4 Э1 Э2	0		
3.2	Drugs, affecting afferent innervation: local anesthetics, demulcents, adsorbents, astringent, irritating drugs /Пр/	5	3	ОПК-8	Л1.2 Л1.3 Л2.1 Л3.4 Э1 Э2	0		
3.3	Cholinergic drugs (1- part). /Лек/	5	2	ОПК-8	Л1.2 Л1.3 Л2.1 Л3.4 Э1 Э2	0		
3.4	Cholinergic drugs (1- part). /Пр/	5	3	ОПК-8	Л1.3 Л2.1 Л3.4 Э1 Э2	0		
3.5	Cholinergic drugs (2 – part). /Лек/	5	2	ОПК-8	Л1.2 Л1.3 Л2.1 Л3.4 Э1 Э2	0		

3.6	Cholinergic drugs (2 – part). /Пп/	5	2	ОПК-8	Л1.2 Л1.3 Л2.1 Л3.4 Э1 Э2		
3.7	Adrenergic drugs (1-part) /Лек/	5	2	ОПК-8	Л1.2 Л1.3 Л2.1 Л3.4 Э1 Э2	0	
3.8	Adrenergic drugs (2 – part) /Лек/	5	2	ОПК-8	Л1.2 Л1.3 Л2.1 Л3.4 Э1 Э2	0	
3.9	Adrenergic drugs (1-part) /Пп/	5	3	ОПК-8	Л1.2 Л1.3 Л2.1 Л3.4 Э1 Э2	0	
3.10	Independent work on the section « Drugs, affecting peripheral nervous system» /Ср/	5	14	ОПК-8	Л1.2 Л1.3 Л2.1 Л3.4 Э1 Э2	0	Preparation for control work on section "Drugs, affecting peripherally nervous system", writing
3.11	Adrenergic drugs (2 – part) /Пп/	5	3	ОПК-8	Л1.2 Л1.3 Л2.1 Л3.4 Э1 Э2	0	
	Раздел 4. Section 4. Drugs, affecting central nervous system						
4.1	General anesthetics /Лек/	5	2	ОПК-8	Л1.2 Л1.3 Л2.1 Л3.1 Э1 Э2	0	
4.2	General anesthetics /Пп/	5	3	ОПК-8	Л1.2 Л1.3 Л2.1 Л3.1 Э1 Э2	0	
4.3	Ethanol. Sedative- hypnotics /Лек/	5	2	ОПК-8	Л1.2 Л1.3 Л2.1 Л3.1 Э1 Э2	0	
4.4	Ethanol. Sedative- hypnotics /Пп/	5	3	ОПК-8	Л1.2 Л1.3 Л2.1 Л3.1 Э1 Э2	0	
4.5	Antiseizure drugs. Antiparkinson drugs /Лек/	5	2	ОПК-8	Л1.2 Л1.3 Л2.1 Л3.1 Э1 Э2	0	
4.6	Antiseizure drugs. Antiparkinson drugs /Пп/	5	3	ОПК-8	Л1.2 Л1.3 Л2.1 Л3.1 Э1 Э2	0	
4.7	Analgesics /Лек/	5	2	ОПК-8	Л1.2 Л1.3 Л2.1 Л3.1 Э1 Э2	0	
4.8	Analgesics /Пп/	5	3	ОПК-8	Л1.2 Л1.3 Л2.1 Л3.1 Э1 Э2	0	
4.9	Central nervous system depressants /Лек/	5	2	ОПК-8	Л1.2 Л1.3 Л2.1 Л3.1 Э1 Э2	0	
4.10	Central nervous system depressants /Пп/	5	3	ОПК-8	Л1.2 Л1.3 Л2.1 Л3.1 Э1 Э2	0	

4.11	Central nervous system stimulants /Лек/	5	3	ОПК-8	Л1.2 Л1.3 Л2.1 Л3.1 Э1 Э2	0	
4.12	Central nervous system stimulants /Пр/	5	3	ОПК-8	Л1.2 Л1.3 Л2.1 Л3.1 Э1 Э2	0	
4.13	Independent work on the section « Drugs, affecting central nervous system» /Ср/	5	16	ОПК-8	Л1.2 Л1.3 Л2.1 Л3.1 Э1 Э2	0	Preparation for control
Раздел 5. Section 5. Drugs, affecting cardiovascular system							
5.1	Cardiotonic drugs /Лек/	5	2	ОПК-8	Л1.3 Л1.4 Л2.1 Л3.2 Э1 Э2	0	
5.2	Cardiotonic drugs /Пр/	5	3	ОПК-8	Л1.3 Л1.4 Л2.1 Л3.2 Э1 Э2	0	
5.3	Antianginal drugs. Lipid-lowering drugs. /Лек/	5	2	ОПК-8	Л1.3 Л1.4 Л2.1 Л3.2 Э1 Э2	0	
5.4	Antianginal drugs. Lipid-lowering drugs. /Пр/	5	3	ОПК-8	Л1.3 Л1.4 Л2.1 Л3.2 Э1 Э2	0	
5.5	Intermediate attestation /Зачёт/	5	0	ОПК-8	Л1.3 Л1.4 Л2.1 Л3.2 Э1 Э2	0	By results current
5.6	Antihypertensive drugs /Пр/	6	2	ОПК-8	Л1.3 Л1.4 Л2.1 Л3.2 Э1 Э2	0	
5.7	Antihypertensive drugs /Лек/ 5	6	2	ОПК-8	Л1.3 Л1.4 Л2.1 Л3.2 Э1 Э2	0	
5.8	Independent work on the section " Drugs, affecting cardiovascular system " /Ср/	6	2	ОПК-8	Л1.3 Л1.4 Л2.1 Л3.2 Э1 Э2	0	Preparation for control work on section " Drugs, affecting cardiovascular system ", writing formu
Раздел 6. Section 6. Drugs, affecting function of executive bodies and processes of tissue metabolism							
6.1	Drugs, affecting the respiratory system /Лек/	6	2	ОПК-8	Л1.3 Л1.4 Л2.1 Л3.2 Э1 Э2	0	
6.2	Drugs, affecting the respiratory system /Пр/	6	2	ОПК-8	Л1.3 Л1.4 Л2.1 Л3.2 Э1 Э2	0	
6.3	Drugs, affecting the digestive system /Лек/	6	2	ОПК-8	Л1.3 Л1.4 Л2.1 Л3.2 Э1 Э2	0	

6.4	Drugs, affecting the digestive system /Пр/	6	2	ОПК-8	Л1.3 Л1.4 Л2.1 Л3.2 Э1 Э2	0	
6.5	Diuretics. Drugs, reducing the content in the body uric acid. Drugs, affecting on the tone of the myometrium. /Лек/	6	2	ОПК-8	Л1.3 Л1.4 Л2.1 Л3.2 Э1 Э2	0	
6.6	Diuretics. Drugs, reducing the content in the body uric acid. Drugs, affecting on the tone of the myometrium. /Пр/	6	2	ОПК-8	Л1.3 Л1.4 Л2.1 Л3.2 Э1 Э2	0	
6.7	Drugs, affecting the blood system /Лек/	6	2	ОПК-8	Л1.3 Л1.4 Л2.1 Л3.2 Э1 Э2	0	
6.8	Drugs, affecting the blood system /Пр/	6	2	ОПК-8	Л1.3 Л1.4 Л2.1 Л3.2 Э1 Э2	0	
6.9	Hormonal preparations, and their synthetic analogues, antagonists /Лек/	6	2	ОПК-8	Л1.3 Л1.4 Л2.1 Л3.2 Э1 Э2	0	
6.10	Hormonal preparations, and their synthetic analogues, antagonists /Пр/	6	2	ОПК-8	Л1.3 Л1.4 Л2.1 Л3.2 Э1 Э2	2	
6.11	Vitamin preparations. Acids and alkali. Enzyme preparations /Лек/	6	2	ОПК-8	Л1.3 Л1.4 Л2.1 Л3.2 Э1 Э2	0	
6.12	Independent work on the section « Drugs, affecting function of executive bodies and processes of tissue metabolism » /Ср/	6	6	ОПК-8	Л1.3 Л1.4		Preparation for the colloquium on section «Drugs, affecting function of executive bodies and processes of tissue metabolism » writing formula student for medicinal
6.13	Vitamin preparations. Acids and alkali. Enzyme preparations /Пр/	6	2	ОПК-8	Л1.3 Л1.4 Л2.1 Л3.2 Э1 Э2	0	
	Раздел 7. Section 7. Anti-inflammatory, antiallergic, chemotherapeutic and immunotropic drugs						
7.1	Anti-inflammatory medicines /Лек/	6	2	ОПК-8	Л1.3 Л2.1 Э1 Э2	0	
7.2	Anti-inflammatory medicines /Пр/	6	2	ОПК-8	Л1.3 Л2.1 Э1 Э2	0	
7.3	Antiallergic medicines /Лек/	6	2	ОПК-8	Л1.3 Л2.1 Э1 Э2	0	
7.4	Antiallergic medicines /Пр/	6	2	ОПК-8	Л1.3 Л2.1 Э1 Э2	0	
7.5	principles of chemotherapy. Antiseptic and disinfecting drugs /Лек/	6	2	ОПК-8	Л1.3 Л2.1 Э1 Э2	0	

7.6	principles of chemotherapy. Antiseptic and disinfecting drugs /Пп/	6	2	ОПК-8	Л1.3 Л2.1 Э1 Э2	2	
7.7	Antibiotics (b-lactam antibiotics) /Лек/	6	2	ОПК-8	Л1.3 Л2.1 Э1 Э2	0	
7.8	Antibiotics (b-lactam antibiotics) /Пп/	6	2		Л1.3 Л2.1 Э1 Э2	0	
7.9	Antibacterial drugs of different chemical structure /Лек/	6	2	ОПК-8	Л1.3 Л2.1 Э1 Э2	0	
7.10	Antibacterial drugs of different chemical structure /Пп/	6	2	ОПК-8	Л1.3 Л2.1 Э1 Э2	0	
7.11	Independent work on antiseptic and disinfectant drugs /Ср/	6	3	ОПК-8	Л1.3 Л2.1 Э1 Э2	0	Preparation for control work on subsection "Antibiotics, antiseptic and disin"
7.12	Antituberculous drugs /Лек/	6	2	ОПК-8	Л1.3 Л2.1 Э1 Э2	0	
7.13	Antituberculous drugs /Пп/	6	2	ОПК-8	Л1.3 Л2.1	7.12	
7.14	Antiviral drugs /Лек/	6	2	ОПК-8	Л1.3 Л2.1 Э1 Э2	0	
7.15	Antiviral drugs /Пп/	6	2	ОПК-8	Л1.3 Л2.1	0	
7.16	Anti-spirochetes and antifungal drugs /Лек/	6	2	ОПК-8	Л1.3 Л2.1	0	
7.17	Anti-spirochetes and antifungal drugs /Пп/	6	2	ОПК-8	Л1.3 Л2.1 Э1 Э2	0	
7.18	Anti-protozoal drugs /Лек/	6	2	ОПК-8	Л1.3 Л2.1 Э1 Э2	0	
7.19	Anti-protozoal drugs /Пп/	6	2	ОПК-8	Л1.3 Л2.1 Э1 Э2	0	
7.20	Anthelmintic drugs /Лек/	6	2	ОПК-8	Л1.3 Л2.1 Э1 Э2	0	
7.21	Antineoplastics drugs /Лек/	6	2	ОПК-8	Л1.3 Л2.1 Э1 Э2	0	
7.22	Anthelmintic drugs /Пп/	6	2	ОПК-8	Л1.3 Л2.1 Э1 Э2	0	
7.23	Pharmacology and Evidence medicine /Лек/	6	2	ОПК-8	Л1.3 Л2.1 Э1 Э2	0	

7.24	Independent work on the section « Anti-inflammatory, antiallergic, chemotherapeutic and immunotropic	6	7	ОПК-8	Л1.3 Л2.1 Э1 Э2	0	Preparation for
7.25	Antineoplastics drugs /Пр/	6	2	ОПК-8	Л1.3 Л2.1 Э1 Э2	2	
7.26	Intermediate attestation /Зачёт/	6	0	ОПК-8	Л1.3 Л2.1 Э1 Э2	0	By results
7.27	7.27	7.27	7.27	7.27	7.27	7.27	7.27

5. ASSESSMENT FUND

5.1. Advancement Questions and Assignments

Advancement Questions and Assignments

Knowledge:

Recipe, its structure. Rules of drawing up recipes.

Pharmakopeyu (state, European, international), its content and purpose.

General principles of prescription and preparation of prescription drugs.

Rules for the prescription, storage and release of toxic, narcotic, potent medicines. Lists of toxic and potent medicines.

Medicinal forms, their classification.

Solid dosage forms. General characteristics, composition, rules for prescribing powders.

Soft medicinal forms. General characteristics, composition, rules of discharge.

Liquid dosage forms. General characteristics, composition, rules of discharge.

Using the Latin language.

State drug policy of the Kyrgyz Republic. List and National Formulary medicines of the Kyrgyz Republic.

The concept of essential (vital) medicines WHO.

Concept of international non-proprietary (generic) names of medicinal products. WHO recommendations on use generic names of

medicines. Generic drugs. Requirements for generic drugs.

Factors determining the selection of essential medicines.

Pharmacokinetics of drugs. Ways of administration of medicines.

Basic suction mechanisms.

Distribution of drugs in the body. Biological barriers. Depositing.

Biodiversity. Factors affecting the bioavailability of individual groups of drugs. Bioequivalence medicines.

Transfer of medicines in the body.

Pathways of excretion of drugs from the body.

The half-life of drugs. Clearance (general, renal, hepatic).

Pharmacodynamics of medicines. Basic principles of action of drugs, types of action medicinal substances (local, reflex, resorptive).

Dependence of pharmacokinetic properties on the chemical structure and physicochemical properties of the drug substances.

Dependence of the pharmacological effect on the dose of the active substance. Types of doses. Latitude of therapeutic actions.

Chronopharmacology. The importance of circadian rhythms and the state of the organism for the action of pharmacological substances.

Pharmacogenetics. The influence of genetic factors on pharmacogenetics, metabolism, pharmacological effects, toxicity of drugs.

Changing the effect of drugs with repeated administration. Addiction (tolerance), tachyphylaxis.

Material and functional cumulation. Sensitization. Drug dependence (mental, physical).

Combined action of drugs. Synergism (summation, potentiation). Antagonism. Antidotism.

Side effects of allergic and non-allergic nature.

Toxic effect of drugs. Teratogenicity. Mutagenicity. Carcinogenicity.

Complications associated with side effects of drugs (hepatotoxic and ulcerogenic effects).

Complications associated with side effects of drugs (neurotoxic and nephrotoxic action).

Hematologic manifestations of side effects of drugs.

Complications associated with increased sensitivity of the patient to drugs (variants of allergic reactions).

Factors that enhance the undesirable effects of drugs.

Emergency measures for acute poisoning.

Prevention of acute poisoning with drugs.

General characteristics, classification of agents affecting the afferent nervous system.

Concept of local anesthetic action. Types of anesthesia.

Classification of local anesthetics by chemical structure, according to indications for use.

Localization and mechanism of action of local anesthetics.
Requirements for local anesthetics and comparative characteristics of drugs from each group. Indication for the use of local anesthetics.
Toxic effect of local anesthetics and measures to prevent it.
Astringents drugs (tannin, bismuth nitrate basic). Classification, pharmacokinetic and pharmacodynamics, properties of astringents. Indications for use and side effects.
Demulcents drugs (mucus from starch and flax seeds). Operating principle. Application.
Absorbent drugs (activated carbon). Operating principle. Application.
Irritant drugs (ammonia solution, menthol, mustard). Effect of irritants on skin and mucous membranes shell. The meaning of the reflexes that arise. "Distracting" effect. Trophic action. Indications for application.
Side effects
Anatomo-physiological features of the autonomic nervous system.
Chemical component of nerve impulse transmission, the concept of mediators. Division of cholinergic receptors on muscarinic- and nicotine-sensitive (M- and H-cholinergic receptors of their subtypes), their localization and effects associated with their excitement.
Classification of drugs affecting the transmission of excitation in the cholinergic synapses.
M-N-cholinomimetic drugs. M-N-cholinomimetiki, localization and mechanism of action. Pharmacokinetics, basic pharmacological effects. Indications for use and side effects.
Anticholinesterases. The nature of the interaction with acetylcholinesterase. Classification anticholinesterase drugs. Localization, mechanism of action and basic effects. Features of the action organophosphorus compounds (armin). Indications for use. Acute poisoning and help measures.
Use of cholinesterase reactivators for organophosphorous compounds poisoning.
M- M-cholinomimetic drugs. Effects arising from the excitation of different subtypes of M-cholinoretseptorv.
Influence of M-cholinomimetics on the eye (pupil size, intraocular pressure, accommodation), smooth muscles internal organs, secretion of glands.
Indications, contraindication to use and side effects. Acute poisoning and help measures.
M-cholinoblocking drugs. M-cholinoblockers. Localization and mechanism of action. Comparative characteristics of drugs, indications for use, side effects. Properties and application of selective blockers of peripheral M-cholinergic receptors.
Sharp poisoning M-cholinoblockers and measures of help.
Concept of H- cholinergic receptors, subtypes of H- cholinergic receptors and their localization.
Classification of drugs affecting H-cholinergic receptors.
N-cholinomimetic drugs, Physical and chemical characteristics, pharmacokinetics, localization and mechanism actions. Main pharmacological effects. Indications for use. The toxic effect of nicotine. Application N-cholinomimetic drugs means to facilitate the weaning from smoking.
N- cholinoblocking drugs ganglion blockers. Classification, physico-chemical characteristics, pharmacokinetics, localization and mechanism of action. The main pharmacological effects of ganglion blockers. Indications for use. Side effects and their prevention.
Means that block neuromuscular transmission (curare-like remedies). Classification. Physicochemical characteristic, localization and mechanism of action of depolarizing and antidepolarizing muscle relaxants. Pharmacokinetics, the main pharmacological effects. Muscle relaxants of central action. Indications for application. Side effects.
Measures for the overdose of curare-like remedies. Use of anticholinesterase drugs in overdose of muscle relaxants.
Adrenoceptors, their kinds, localization, pharmacological effects caused by their stimulation and blocking. The concept of receptor selectivity.
Biosynthesis and metabolism of mediators-catecholamines. The mechanism of impulse transmission in adrenergic synapses.
6Classification of adrenergic (adrenomimetics) and antiadrenergic (adrenoblockers) drugs.
Localization, mechanism of action, pharmacological effects, indications for use, side effects, comparative characteristics of direct adrenomimetics.
Localization, the mechanism of action, pharmacological effects, indications for use, side effects, comparative characteristics of indirect adrenomimetics.
Localization, the mechanism of action, pharmacological effects, indications for use, side effects, comparative characteristic of sympathomimetics.
Localization, mechanism of action, pharmacological effects, indications for use, side effects, comparative characteristics of α -blockers (selective and non-selective).
Localization, the mechanism of action, pharmacological effects, indications for use, side effects, comparative characteristic of β -blockers (selective and non-selective).
Localization, mechanism of action, pharmacological effects, indications for use, side effects,

comparative characteristic of sympatholytic patients.
History of the discovery and use of drugs for anesthesia (U. Morton, N.I. Pirogov, N.P. Kravkov).
Concept of anesthesia and the breadth of narcotic action, the main goals of general anesthesia, the theory of anesthesia.
Possible mechanisms of general anesthetic action of drugs for anesthesia.
Classification of drugs for anesthesia.
Drugs for inhalation anesthesia, general characteristics of the group, mechanism of action, pharmacological effects, indications for use and side effects.
Drugs for non-analgesic anesthesia, general characteristics of the group, mechanism of action, pharmacological effects, indications for use and side effects.
Types of anesthesia, the concept of premedication, the principles of combined anesthesia, complications during and after anesthesia.
The influence of ethanol on the central nervous system, on the cardiovascular system, the excretory system, the liver. The energy value of ethanol.
Local action of ethanol on the skin and mucous membranes. Antimicrobial action of ethanol. The use of ethanol in medical practice.
Toxicological characteristics of ethanol. Acute ethanol poisoning and its treatment. Alcoholism and its social aspects.
Pharmacotherapy of alcoholism (disulfiram).
Classification of hypnotics. The influence of sleeping pills on the structure of sleep. Possible mechanisms of sleeping pills actions.
Benzodiazepine derivatives with a pronounced hypnotic effect.
Production of barbituric acid, classification, features of pharmacodynamics and pharmacokinetics.
The hypnotic substances of different chemical groups (zopiclone, chloral hydrate).
Sharp poisoning with hypnotics, the principles of its pharmacotherapy. Antagonists of sleeping pills benzodiazepine series (flumazenil) and barbiturates (bemegrid).
Classification of antiepileptic drugs. Possible mechanisms of action. Comparative evaluation effectiveness of individual drugs in different forms of epilepsy. Side effects.
Classification of antiparkinsonian drugs.
Basic principles of pharmacological correction of extrapyramidal disorders. Mechanisms of action antiparkinsonian means, stimulating dopaminergic processes. MAO-B inhibitors (selegiline).
Comparative evaluation of the effectiveness of individual drugs.
The use of DOPA-decarboxylase (carbidopa, benserazide) inhibitors, peripheral dopamine blockers receptors.
Side effects of antiparkinsonian drugs.
General characteristics of analgesics.
Presentation on opioid receptors and their endogenous ligands.
Classification of narcotic analgesics.
Mechanisms of analgesic analgesics, interaction with different subtypes
Effects due to influence on the central nervous system. Influence on the activity of internal organs (cardiovascular system, gastrointestinal tract), etc.
Comparative characteristics of individual drugs.
Partial agonists are antagonists of opioid receptors (buprenorphine, nalbuphine, butorphanol).
Indications for the use of opioid analgesics.
Side Effects. Addiction, drug dependence.
Acute poisoning with opioid analgesics, measures of care. An antagonist of opioid analgesics (naloxone).
Operating principle.
Application.
Neopioid analgesics mainly central action. Sodium channel blockers (carbamazepine), inhibitors of reverse neuronal capture of monoamines (amitriptyline, imipramine), α_2 - adrenomimetics (clonidine), antagonists of NMDA receptors (ketamine), GABA- β -mimetics. Mechanisms of analgesic action. Differences from opioid analgesics. Application.
Classification of non-narcotic analgesics.
Mechanisms of analgesic action of non-narcotic analgesics.
Comparative characteristics of non-narcotic analgesics from different chemical groups (salicylates, derivatives of pyrazolone and paraaminophenol).
Indications for use. Side effects.
Acute paracetamol poisoning, measures of care.
General characteristics of psychotropic drugs, classification.
Classification of antipsychotics. Characteristics of individual groups of antipsychotics, depending on the chemical structure.
Pharmacokinetics of neuroleptics. The points of application and the principle of action of neuroleptics on the exchange of

dopamine, serotonin and norepinephrine in the central nervous system.
Typical antipsychotics. Pharmacokinetics and pharmacodynamics, comparative characteristics, indications for use, side effects.
"Atypical" antipsychotics (clozapine, sulpiride). Pharmacokinetics and pharmacodynamics, comparative characteristics, indications for use, side effects.
Nomotimics. Lithium salts. Possible mechanisms of action. Pharmacokinetics and basic pharmacological effects of lithium salts. Indications for use, side effects.
Classification of anxiolytics (tranquilizers). Pharmacokinetics and pharmacodynamics of anxiolytics, indications for application.
Anxiolytics of the benzodiazepine series, a general characteristic. The concept of benzodiazepine receptors, their ligands. Pharmacokinetics and pharmacodynamics of anxiolytics of the benzodiazepine structure.
Anxiolytics of the nonbenzodiazepine series. Pharmacokinetics and pharmacodynamics, indications for use, side effects.
Possibility of development of drug dependence when using anxiolytics. The antagonist of benzodiazepines - flumazenyl.
General characteristics of sedatives, the mechanism of action, pharmacokinetics and pharmacodynamics of drugs. Indications for use and side effects.
General characteristics and classification of antidepressants.
Inhibitors of reverse neuronal capture of monoamines are substances of indiscriminate effect. Physico-chemical and pharmacokinetic characteristics, localization and mechanism of action. Effect on dopaminergic, adrenergic, cholinergic neurotransmitter system of the brain. Peripheral neurotropic effects. Indications for use and side effects.
Selective inhibitors of reverse neuronal seizure of serotonin. Features of the spectrum of pharmacological actions. Indications for use, side effects.
Inhibitors MAO irreversible (nialamide) and reversible action. Physico-chemical, pharmacokinetic characterization, localization and mechanism of action. Main pharmacological properties. Selective inhibitors MAO (moclobemide). Pharmacodynamics, indications for use.
Psychostimulants, their classification. Physicochemical, pharmacokinetic characteristics, Possible mechanisms of psychostimulating action. Main pharmacological effects, effects on cardiovascular system. Indications for use, side effects. The possibility of developing drug dependence.
Classification of analeptics. Physicochemical and pharmacokinetic features, localization and mechanisms stimulating effect on the central nervous system. The term "awakening action". Influence on respiration and circulation. Indications for use. Side effects.
History of the study of cardiac glycosides. Plants containing cardiac glycosides. Individual glycosides, isolated from plants.
Classification of cardiotoxic drugs, mechanism of action, pharmacological effects, indications for use and side effects.
Classification of antianginal drugs, mechanism of action, pharmacological effects, indications for use and side effects.
Classification of lipid-lowering drugs, mechanism of action, pharmacological effects, indications for use and side effects.
Classification of antihypertensive drugs, mechanism of action, pharmacological effects, indications for use and side effects.
Classification of antiarrhythmic drugs, mechanism of action, pharmacological effects, indications for use and side effects.
Classification of drugs that affect the function of the respiratory system.
Stimulators of respiration. Classification, pharmacokinetics, pharmacodynamics, indications for use, side effects.
Antitussive remedies. Classification, pharmacokinetics, pharmacodynamics, indications for use, side effects.
Expectorants. Classification, pharmacokinetics, pharmacodynamics, indications for use, side effects effects.
Classification of drugs used in bronchoobstructive syndrome.
Medicines used in bronchoobstructive syndrome (β_2 -adrenomimetics). Pharmacokinetics, pharmacodynamics, indications for use, side effects.
Medicines used in bronchial obstructive syndrome (M-holinoblokatory and spasmolyticsmyotropic action). Pharmacokinetics, pharmacodynamics, indications for use, side effects.
Medicines used for bronchial obstructive syndrome (drugs with anti-inflammatory and anti-allergic activity). Pharmacokinetics, pharmacodynamics, indications for application, side effects.
Principles of action of drugs used for pulmonary edema. The choice of the drug depending on the pathogenetic mechanisms of its development.
Medicines used for pulmonary edema (cardiac and diuretics). Pharmacokinetics, pharmacodynamics, indications for use, side effects.
Medicines used for swelling of the lungs (vasodilators and hypotensive drugs). Pharmacokinetics,

pharmacodynamics, indications for use, contraindications, side effects.

Medicines used for pulmonary edema (narcotic analgesics, antifoaming agents, oxygen therapy). Pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Classification of diuretics.

Mecheroids, having a direct effect on the function of the epithelium of the renal tubules. Pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Muscle drugs (aldosterone antagonists and osmotically active diuretics). Pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Drugs, reducing the content of uric acid in the body. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Drugs that affect the tone and contractile activity of the myometrium. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Classification of drugs affecting the functions of the digestive system.

Drugs that affect the appetite. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Means used in the violation of the glands of the stomach (substitute therapy, stimulating the secretion of the glands of the stomach).

Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Drugs used in the violation of the glands of the stomach (drugs that reduce the secretion of the glands of the stomach, antacids).

Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Drugs used in the violation of the glands of the stomach (gastroprotectors). Pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Drugs that affect the motility of the stomach and intestines. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Emetic and anti-emetics. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Cholagogue preparations. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Drugs used in violation of the excretory function of the pancreas. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Laxatives. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Classification of funds affecting the blood system.

Drugs that influence erythropoiesis. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Drugs that affect leukopoiesis. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Drugs that increase blood coagulability. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Drugs, reducing coagulability of blood (anticoagulants of direct action). Pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Drugs, reducing coagulability of blood (anticoagulants of indirect effect). Pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Drugs that affect fibrinolysis. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Drugs that influence the aggregation of platelets. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Classification of hormonal drugs.

Sources of reception of hormonal means. General principles of biological standardization. Principles hormonal therapy.

Preparations of pituitary hormones. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications,

side effects.

Drugs of thyroid hormones and antithyroid drugs. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Physiological significance and practical application of calcitonin. The drug is the hormone parathyroid glands. Pharmacokinetics,

pharmacodynamics, indications for use, contraindications, side effects.

Preparations of insulin. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Synthetic hypoglycemic agents. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Preparations of hormones of ovaries (estrogenic and gestagenic preparations). Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Preparations of male sex hormones. Pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Anabolic steroids. Pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Preparations of hormones of the adrenal cortex (glucocorticoids). Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Preparations of hormones of the adrenal cortex (mineralocorticoids). Pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Classification of vitamin preparations.

Preparations of water-soluble vitamins (vitamins of group B). Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Preparations of water-soluble vitamins (ascorbic acid and rutoside). Pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Preparations of fat-soluble vitamins. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Acids and alkalis. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Salts of alkali and alkaline-earth metals. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Ferment preparations. Inhibitors of proteolytic enzymes. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Classification of anti-inflammatory drugs.

Steroidal anti-inflammatory drugs. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Non-steroidal anti-inflammatory drugs. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Anti-allergic drugs. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Antihistamines. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Immunotropona drugs. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Chemotherapeutic agents. History of the use of chemotherapeutic agents in medicine.

Classification of chemotherapeutic agents. Basic principles of chemotherapy.

Antibiotics. History of antibiotic use. Principles of classification of antibiotics.

Antibiotics of the penicillin group. Biosynthetic penicillins. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Semi-synthetic penicillins. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects. Combined use of semisynthetic penicillins with inhibitors of β -lactamases (clavulanic acid).

Antibiotics of the group of cephalosporins. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Monobactams, carbapenems. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Antibiotics of macrolides and azalides. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Lincosamides. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Antibiotics of the tetracycline group. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Chloramphenicol. Spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Antibiotics - aminoglycosides. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Polimixins. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Complications with antibiotic therapy, their prevention and correction.

Sulfanilamide preparations. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Synthetic antimicrobial agents of different chemical structure (quinolone derivatives). The spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Synthetic antimicrobial agents of different chemical structure (derivatives of 8-hydroxyquinoline and nitrofurantoin). Spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Basic principles of chemotherapy for tuberculosis. General characteristics of antituberculous agents. Classification. Standard treatment regimens DOTS.

Antituberculous agents of the first line. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Anti-tuberculosis drugs of II and III lines. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Anti-spirochetes drugs. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Classification of antiviral agents.

Antiviral drugs. Spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Antimalarials drugs. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Anti-amebic drugs. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Drugs used for giardiasis and trichomonadosis. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Drugs used for toxoplasmosis and leishmaniasis. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Antifungal drugs. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Anti-warts agents. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

Concept of antiseptics and disinfection. History of the use of antiseptic agents.

Classification of antiseptic and disinfectants.

Antiseptic and disinfectants. Spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

effects.

Antineoplastics and adjuvant agents. Classification, mechanism of action, basic pharmacological effects, indications for use and side effects.

Skills:

Write prescriptions for various dosage forms.

Calculate the amount of medicinal substance.

Determine the measures of the weight of medicinal substances.

Control the correctness of prescription of medical prescriptions.

Determine the mechanism and principle of action of medicines;

Identify the types of doses;

Identify the types of side effects and complications associated with side effects of drugs;

Use international non-proprietary names of medicinal products.

Expertise:

The Latin language.

International non-proprietary names of medicinal products.

Skills for registration of prescriptions and preparation of prescription drugs;

Skills for prescribing medicines for various diseases and conditions;

Skills for registration of the student's form for medicines.

5.2. Course Papers Themes

not provided

5.3. Assessment Fund

Assessment Fund

Test work under the "General Recipe" (example), 8 options:

Write in recipes:

1.10 official tablets "Amazol" ("Amazolium"). Assign 1 tablet 2 times a day.

2.20 gelatin capsules containing 5 dg of ferrous lactate iron (Ferri lactas) and 1 dg of ascorbic acid (Acidum ascorbinicum). Assign

1 capsule 3 times a day.

3.20 caramels containing 15 ml degalin (Degalini chloridum). Take 1 caramel every 5 hours, place under the tongue and keep in your mouth until completely absorbed.

4.30 grams of ointment on vaseline and lanolin (equally), each gram of which contains 500,000 units of levorin (Levorinum). To

lubricate the affected skin.

5.50 grams of paste on vaseline jelly and lanolin (equally), containing 5% sulfonamide (Sulfanilamidum). For lubrication affected areas of the skin.

6.12 vaginal suppositories containing 3 cg quinazole (Chinozolum) and 1 dg of boric acid (Acidum boricum).

Introduce 1

suppository 1 time per day in the vagina.

7. Salt solution of sodium salicylate (Sodii salicylas) for 5 days in such concentration that the patient at appointment on 1 dining

room spoon received 1 g of the drug. Assign 1 tablespoon 4 times a day.

8.100 ml sterile 0.5% solution of procaine (Procainum), prepared on isotonic sodium chloride solution (Sodii chloridum). Assign to

the paranephalic blockade of A.V. Vishnevsky.

9.20 ampoules containing 5 mg of trypsin crystalline (Tripsinum crystallisatum). Before use, the contents

Ampules dissolve in 2-3

ml of isotonic sodium chloride solution. For inhalations.

10.25 ml of the mixture consisting of 1 part of belladonna tincture (Belladonna) 2 parts of lily of the valley tincture (Convallaria)

and 2 parts of the valerian tincture (Valeriana) with the addition of 2 dg menthol (Mentholum). Assign 25 drops 2-3 times a day.

Colloquium on "General Pharmacology: General Recipe" (example), 8 options:

I. Complete the task on the medical recipe

Write in recipes:

1.10 official tablets "Amazol" ("Amazolium"). Assign 1 tablet 2 times a day.

2.20 gelatin capsules containing 5 dg of ferrous lactate iron (Ferri lactas) and 1 dg of ascorbic acid (Acidum ascorbinicum). Assign

1 capsule 3 times a day.

3.20 caramels containing 15 ml degalin (Degalini chloridum). Take 1 caramel every 5 hours, place under the tongue and keep in your mouth until completely absorbed.

4.30 grams of ointment on vaseline and lanolin (equally), each gram of which contains 500,000 units of levorin (Levorinum). To

lubricate the affected skin.

5. 50 grams of paste on vaseline jelly and lanolin (equally), containing 5% sulfonamide (Sulfanilamidum). For lubrication affected

areas of the skin.

6. 12 vaginal suppositories containing 3 cg quinazole (Chinozolum) and 1 dg of boric acid (Acidum boricum). Introduce 1 suppository 1 time per day in the vagina.

7. Salt solution of sodium salicylate (Sodii salicylas) for 5 days in such concentration that the patient at appointment on 1 dining

room spoon received 1 g of the drug. Assign 1 tablespoon 4 times a day.

8. 100 ml sterile 0.5% solution of procaine (Procainum), prepared on isotonic sodium chloride solution (Sodii chloridum). Assign to

the paranephalic blockade of A.V. Vishnevsky.

9. 20 ampoules containing 5 mg of trypsin crystalline (Tripsinum crystallisatum). Before use, the contents Ampules dissolve in 2-3

ml of isotonic sodium chloride solution. For inhalations.

10. 25 ml of the mixture consisting of 1 part of belladonna tincture (Belladonna) 2 parts of lily of the valley tincture (Convallaria)

and 2 parts of the valerian tincture (Valeriana) with the addition of 2 dg menthol (Mentholum). Assign 25 drops 2-3 times a day.

II. To answer questions (general pharmacology):

1. Concept of pharmacokinetics. Absorption of drugs for different routes of administration. Factors affecting absorption of drugs.

The concept of bioavailability.

2. Concept of the main (vital) medicines. Criteria for selecting essential medicines. Generic drugs. The concept of bioequivalence.

III. Reserve questions (side effects):

1. Side effects, classification. Side effects of allergic nature.

2. Toxic side effects.

Control work under the section "Funds affecting the peripheral nervous system", 8 options:

Example test:

I. Complete the task on the medical recipe

Write in recipes:

1. Means for terminal anesthesia

2. An irritant

3. Means facilitating neuromuscular transmission

4. Means for reflex stimulation of the respiratory center

5. Means for treatment of rhinitis

II. Classification of local anesthetics with drugs

III. Draw a cholinergic synapse. In the figure, indicate the localization of the action of M- holinomimetics.

Describe the mechanism

of action, the main pharmacological effects and indications for the use of M-cholinomimetics.

Control work under the section "Funds affecting the central nervous system", 8 options:

Example test:

I. Complete the task on the medical recipe

Write in recipes:

1. Non-inhaling drug, analog of gamma-aminobutyric acid.

2. Ethanol for processing the hands of the surgeon

3. Non-narcotic analgesic from the group of paraaminophenol.

4. A sedative drugs.

5. Antidepressant is a selective serotonin reuptake inhibitor.

II. Classification of hypnotics with the listing of drugs.

III. Determine a group of medicines. Describe the pharmacological effects and indications for use (in tasks will be given different schemes for the mechanisms of action of medicines).

Colloquium in the sections "Drugs, affecting the peripheral and central nervous systems", 8 options:

Example of a written assignment:

I. Perform tasks on the medical recipe.

Write in recipes:

1. Drugs, facilitating neuromuscular transmission

2. Drugs, for elimination of spasms of smooth muscle organs

3. Antidepressant

4. A remedy for epilepsy drugs.

5. A remedy that removes feelings of fear and emotional stress

II. Solve the problem problem:

Refers to a group of local anesthetics from the group of amides. Has a high activity, is used mainly for conductive, epidural

anesthesia, acts continuously (from 3-4 to 7-14 or more hours), dilates the vessels. The drug is not recommended for children under

12 years. Determine the drug. Describe the mechanism of action. Why does this drug last longer than procaine?

III. Pain the cholinergic synapse
 In the figure, indicate the localization of the action of anticholinesterase agents. Describe the mechanism of action, the main pharmacological effects and indications for the use of this group of drugs. Specify the principle of action reactors cholinesterase in poisoning organophosphorus compounds.

IV. Solve the problem problem:
 Fill in the table "Comparative characteristics of narcotic and non-narcotic analgesics"
 Properties Narcotic analgesics Non-narcotic analgesics
 Severity of analgesic effect
 Primary localization of analgesic action
 Mechanism of analgesic action
 Sleeping Pills
 Antipyretic action
 Inhibition of respiration
 Anti-inflammatory action
 Addiction
 Drug addiction
 Specific antagonist.

Control work on the section "Drugs affecting the cardiovascular system", 8 options:
 Example test:
 I. Write in recipes:
 1. A substance that reduces the toxic effect of cardiac glycosides
 2. A medication used in ischemic heart disease is a calcium antagonist
 3. The medication that reduces the tone of the vasomotor center
 II. Classification of antihypertensive drugs (affecting the renin-angiotensin system, myotropic action, affecting the water-salt metabolism).
 III. Mechanisms of the action of antianginal agents
 Colloquium on "Means that affect the function of executive organs and processes of tissue metabolism," 8 options:
 An example of a written task of the colloquium:
 I. Complete the task on the medical recipe
 Write in recipes:
 1. Antidiabetic agent
 2. Antiarrhythmic agent
 3. Antiatherosclerotic means
 4. Fibrinolytic agent
 5. Means for stimulation of birth activity
 Classification of funds used in the violation of the glands of the stomach
 III. Mechanisms of action of antitussives
 IV. List the pharmacological effects of hydrochlorothiazide
 V. Solve problems:
 1. Describe the mechanisms of action and application of the drugs used to treat coronary heart disease (Fill the table):
 The drug The mechanism of action Other effects application
 Glyceryl trinitrate Spasmolytic, myotropic action. Tachycardia. Hypotension
 Propranolol hydrochloride Antiarrhythmic, hypotensive effect, reduction of contractile activity of the myocardium, reduction of cardiac output. Bronchospasm
 Validol Soothing action
 Verapamil hydrochloride Antiarrhythmic, hypotensive effect. Reduction of contractile myocardial activity
 2. Full girl 20 years old, having decided to become a fashion model, started taking the drug. Working in the afternoon, she took the drug in the evening. A few weeks after the start of the drug, she developed a heartbeat, insomnia, about what she turned to the doctor. On admission to the doctor, the patient was found to have high blood pressure. A drug from which group of medicines did the girl take? Why did the above side effects occur? What kind recommendations for rational reception of the drug were given by a doctor?
 Control work under the section "Antibiotics, antiseptic and disinfectants", 8 options
 Example test:
 I. The Pharmacotherapy Challenge
 Write in recipes:

1. Halogen-binding antiseptic. antiseptic.
 2. Antibiotic from the group of semisynthetic penicillins.
 3. Antibiotic from the group of macrolides.
- II. Classification of antiseptic and disinfectants.
- III. Indicate the range of action:
1. Antibiotics from the group of cephalosporins.
 2. Antibiotics from the group of tetracyclines.
- IV. Indicate the mechanisms of action of antibiotics, which violate protein synthesis at the level of ribosomes.
- V. Indicate the side effects of antibiotics - aminoglycosides.
- Colloquium on "Anti-inflammatory, antiallergic, chemotherapeutic and immunotropic drugs ", 8 options

Example of a written task for a colloquium

I. Write in recipes:

1. Steroidal anti-inflammatory agent.
2. Antibiotic from the group of natural penicillins.
3. Combined preparation containing sulfanilamide preparation and trimethoprim.
4. Anti-tuberculosis agent from the group of isonicotinic acid hydrazide
5. Anti-amebic drugs

II. Classification of antimalarial drugs.

III. The mechanism of action of antibiotics of B-lactamides.

IV. Fill in boxes 2, 3, 4 in the table "pharmacokinetic characteristics of antituberculous agents"

Preparation Way of administration Multiplicity of intake Permeability through the BBB

1 2 3 4

isoniazid

rifampicin

V. Determine the preparation A and formulate the principle of its action (diagram or figure)

Formulary list of medicines (Student's form):

- procaine
- lidocaine
- atropine sulfate
- epinephrine hydrochloride
- salbutamol
- propranolol hydrochloride
- atenolol
- phenobarbital
- carbamazepine
- morphine hydrochloride
- triperidine hydrochloride
- acetylsalicylic acid
- paracetamol
- diazepam
- amitriptyline
- bisoprolol
- aminophylline
- digoxin
- procainamide
- verapamil
- glyceryl trinitrate
- lovastatin
- clonidine hydrochloride
- enalapril
- famotidine
- omeprazole
- hydrochlorothiazide
- furosemide
- indapamide
- oxytocin
- iron sulphate
- phytomenadione
- heparin
- insulin
- glibenclamide
- prednisolone
- ascorbic acid
- retinol acetate
- diclofenac-sodium
- ketotifen

- loratadine
- azathioprine
- benzylpenicillin sodium salt
- amoxicillin
- cefotaxime
- doxycycline
- sulfamethoxazole + trimethoprim
- ciprofloxacin
- isoniazid
- rifampicin
- acyclovir
- metronidazole
- mebendazole

Medical Recipe (12 options)

Ticket number 1

Write in recipes:

1. Medication for relief of asthma attacks
2. Means for the prevention of angina attacks
3. Preparation of vitamin C
4. Anandrogenic drug
5. An antiviral agent

Ticket # 2

Write in recipes:

1. A remedy for the treatment of essential hypertension
2. Analeptic agent

3. Hestagenic preparation

4. Medication used in uterine bleeding
5. Antibiotic from the group of aminoglycosides

Ticket # 3

Write in recipes:

1. Medication used for atony of the intestine and bladder
2. Neuroleptic
3. Means for the treatment of megaloblastic anemia
4. Estrogenic drug
5. Antibiotic from the group of cephalosporins

Ticket # 4

Write in recipes:

1. The narcotic analgesic
2. Means for the treatment of atrioventricular blockade
3. Fibrinolytic agent
4. "Potassium-sparing" diuretic
5. Anti-tuberculosis drug

Ticket number 5

Write in recipes:

1. Non-narcotic analgesic
2. Means to eliminate feelings of fear and emotional stress
3. Means for relief of attacks of angina pectoris
4. The yellow remedy
5. Sulfanilamide preparation

Ticket # 6

Write in recipes:

1. Means for stopping renal and hepatic colic
2. Expectorant
3. A blood coagulation agent
4. A remedy for the treatment of diabetes mellitus
5. Antibiotic from the group of tetracyclines

Ticket # 7

Write in recipes:

1. A drug used for glaucoma
2. Specific antagonist of narcotic analgesics
3. Medication for relief of hypertensive crisis
4. Glucocorticoid
5. Antibiotic from the group of macrolides

Ticket number 8

Write in recipes:

1. Means for terminal anesthesia
2. Means for combating vascular collapse

3. Proteolytic enzyme inhibitor
4. Antibiotic from the group of natural penicillins
5. Anti-malarial drugs

Ticket number 9

Write in recipes:

1. Means for infiltration anesthesia
2. The medication used for paroxysmal tachycardia
3. Antitussive remedy
4. Fast-acting diuretic for parenteral administration
5. Antibiotic from the group of semisynthetic penicillins

Ticket number 10

Write in recipes:

1. A drug for the treatment of rhinitis
2. A sedative
3. Laxative
4. Direct anticoagulant
5. Chloramphenicol

Ticket number 11

Write in recipes:

1. The sleeping pills
2. Cardiac glycoside for the treatment of acute heart failure
3. Anticoagulant of indirect action
4. Non-steroidal anti-inflammatory drug
5. Anti-warts agent

Ticket number 12

Write in recipes:

1. Means for arresting epileptic status
2. Cardiac glycoside for the treatment of chronic heart failure
3. Anti-emetic medicine
4. Antihistamine
5. Antibacterial drug from the group of fluoroquinolones.
6. Subject of abstracts
7. • Side effects of drugs: allergic reactions of delayed and immediate type.
8. • Lyell syndrome, manifestations and drugs that cause this syndrome
9. • Reye syndrome, manifestations and drugs that cause this syndrome
10. • Steven-Johnson Syndrome, manifestations and drugs that cause this syndrome
11. • The importance of genetic factors in the development of adverse effects of drugs
12. • Principles for finding new drugs
13. • The use of cholinergic drugs for various pathologies (bronchial asthma, COPD, glaucoma, etc.)
14. • The use of adrenomimetic drugs in emergency conditions
15. • Use of adrenoblocking agents in cardiovascular diseases
16. • Modern means for anesthesia, advantages and disadvantages
17. • Modern anticonvulsants
18. • Place and role of antidepressants in clinical practice
19. • Side effects of modern antidepressants
20. • Antiarrhythmic drugs
21. • Types of dyslipidemia and remedies for their treatment
22. • Thyroid hormones, their importance and application in clinical practice. The problem of iodine deficiency in Kyrgyzstan.
23. • Diabetes mellitus and drugs used to treat it
24. • Modern antiallergic agents, advantages and disadvantages
25. • Features of the use of modern anti-inflammatory drugs in various pathologies. Advantages and limitations.
26. • The use of cephalosporins in surgical practice.
27. • Features of fluoroquinolones and sulfonamides
28. • Problems of antibiotic resistance

5.4. List of Assessment Tools

Test work on the section "General Recipe"

Colloquium in the section "General Recipe: General Pharmacology"

Control work under the section "Drugs affecting the peripheral neural system"

Control work under the section "Drugs affecting the central neural system"

Colloquium on the topic "Drugs affecting the peripheral and central neural system"

Control work on the section "Drugs affecting the cardiovascular system"

Colloquium in the section "Drugs that affect the function of executive organs and processes of tissue metabolism"

Control work under the section "Antibiotics, antiseptic and disinfectants"

Colloquium on "Anti-inflammatory, antiallergic, chemotherapeutic and immunotropic drugs"

Student's Drug Form Medical Recipe Abstracts by sections
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6. COURSE (MODULE) METHODOLOGICAL AND INFORMATIONAL SUPPORT

6.1 Recommended Reading

6.1.1 Required Reading List

	Authors, Compliers	Title	Book publisher, Year
Л1.1	Lippincott	Pharmacology	2014 https://medicscenter.com/download-all-pharmacology-pdf-books-free-preview/
Л1.2	B. Katzung	Basic And Clinical Pharmacology	2021 https://medicscenter.com/basic-and-clinical-pharmacology-by-katzung-new-14th-edition-pdf-free-download/

6.1.2 Advanced Reading

6.1.3 Guidance Papers

	Authors, Compliers	Title	Book publisher, Year
Л3.1	Goodman and Gilman's	The Pharmacological Basis Of Therapeutics 13th Edition, 2021	2021 https://medicscenter.com/goodman-and-gilman-pharmacology-

6.2 Online Resources

Э1	Drugs Database	www.drugs.com
Э2	Medscape	www.medscape.com

6.3. List of Information and Education Technologies

6.3.1 Competence-based Educational Technologies

6.3.1.	Competence-based Educational Technologies
6.3.1.	traditional verbal methods (lectures, talks, explanations);
6.3.1.	visual methods (presentations, stands, posters, types of dosage forms, reference books, textbooks, teaching aids,
6.3.1.	methods of practical training - conducting active and interactive practical classes: solution situational tasks, tests;
6.3.1.	self-study procedures - implementation of the IIW (individual independent work with directories and literature (regular
5	
6.3.1.	Oral control methods: front-line interview, individual survey, preparation of reports on the IIW;
6.3.1.	methods of written control: control and modular work; execution of written test tasks for independent work of the
7	
6.3.1.	methods of monitoring: control and modular work; preparation of the student's formulary for medicines, assignments for
8	
6.3.1.	innovative methods (discussions, analysis of situational tasks, training conferences on problem areas);
6.3.1.	research procedures (research work according to the subject of the department, according to the results of which
1	students

6.3.2 List of Information Reference Systems and Software

6.3.2.	www.medscape.com
6.3.2.	www.drugs.com

7. COURSE (MODULE) LOGISTICS

7.1	7. COURSE (MODULE) LOGISTICS
7.2	For conducting lecture-type lectures there are 1 lecture halls equipped with a demonstration Equipment - computers,

7.3	For practical classes there are 6 classrooms equipped with specialized furniture, visual stands on all sections of the discipline, boards, educational showcases with various medicines, technical means - Wi-Fi, computers, multimedia devices.
7.4	To provide educational information at the department there is a cathedral library, reference books medicines, formulary, guidelines, training aids, educational and methodological recommendations, methodical aids, visual thematic
7.5	To ensure discipline, the department uses visual demonstration materials - trays with a set of drugs of various forms: solid, soft, liquid dosage forms, a set of tasks according to the recipe, prescription forms, sets of tests, colloquiums on all

8. COURSE (MODULE) PROFICIENCY METHODOICAL GUIDELINES (FOR STUDENT)

Recommendations for the organization of independent work of the student

I. Recommendations for planning and organizing the time required for studying the discipline:

Recommendations for lectures:

Study the plan of lectures.

Create a lecture book.

To study the lecture notes on the same day, after the lecture.

To study the lecture notes before practical work.

To study theoretical material on the textbook and abstract - 1 hour per week.

Recommendations for practical exercises:

To study the plan of practical exercises on pharmacology.

Make a commitment for practical classes.

Preparation for a practical lesson.

In preparing for the practical lesson, study the lecture and recommended teaching materials (textbook, training allowances for the

sections of pharmacology, issued by the department) - 2 hours.

When preparing for a practical lesson, use educational and methodological recommendations for independent work student in the

sections of pharmacology (5 recommendations) - answer questions to the topic of the lesson, perform test tasks, solve the situation

problems, write prescriptions - 1 hour.

When preparing for a practical lesson, you also need to register the Student's Student Formulary.

II. Recommendations on the use of materials of educational-methodical complex:

Use educational and methodological recommendations for independent work of the student in the fields of pharmacology (5

recommendations) for preparation for practical classes, current, boundary and intermediate certifications.

Use lecture material.

Use the textbook "Pharmacology" Kharkevich D.A.

Use the manual "General Pharmacology. General Formulation."

Use the manual "Drugs, that affect the peripheral and central nervous systems."

Use the manual " Drugs, that affect the function of executive organs and the processes of tissue metabolism."

III. Recommendations for working with literature:

After studying the material on the topic of the practical lesson in the textbook or teaching aids, it is recommended that exercises on

this topic (draw a mechanism of action, answer questions, perform test tasks, situational tasks from educational-methodical

recommendations) in abstracts.

IV. Recommendations for preparation for the boundary and intermediate control:

When preparing for the boundary and intermediate control, use all materials of the educational and methodical complex.

At the end of each section of pharmacology, a boundary control of knowledge in the form of control works and colloquiums.

When carrying out boundary control, a rating system is used on a 100-point scale. The ball- the rating system provides a comprehensive assessment of student performance in the study of pharmacology; wherein current

performance of students in classroom practical classes (current rating), final classes by section (a rating rating).

Translation of scores into the final rating:

86 - 100 Excellent

76 - 85 Good

61-75 Satisfactory

60 and less Unsatisfactory

When conducting boundary control, the current rating of the student is taken into account.

If you miss practical lessons, lectures, violation of the academic discipline (systematic tardiness or absence in classes / lectures, the

absence of a personal form), penalty points are deducted, which are deducted from the total rating.

The level of knowledge on the test papers is checked as follows: 3 blocks of questions, each estimated at 30 points, for registration of the Form - 10 points.

At the colloquiums it is checked by three methods of control and an evaluation is made on a 100-point system: writing recipes - 30

points, testing of knowledge on the mechanisms of action of drugs, on indications for the use of drugs and (or) the solution

situational tasks - 40 points and an oral theoretical interview - 30 points.

If you miss and if you get a poor grade in a practical lesson when writing a colloquium (less than 60 points or less), the student must

work for them in accordance with the established procedure in order to increase the rating (during 10 days)

The list of boundary controls:

Test work "General Recipe"

Colloquium "General Pharmacology - General Recipe"

Control work "Drugs, affecting the peripheral nervous system"

Control work "Drugs, that affect the central nervous system"

Colloquium "Drugs, affecting the peripheral and central nervous system"

Control work "Drugs, affecting the cardiovascular system"

Colloquium "Drugs, that affect the functions of executive organs and the processes of tissue metabolism"

Control work "Antibiotics, antiseptic and disinfectants"

Colloquium "Anti-inflammatory, antiallergic, chemotherapeutic and immunotropic agents"

Medical Recipe

Test 6 semester

Interim control

At the end of V and VI semesters an intermediate certification is conducted in the form of a test, at the 17-18 week of semesters.

Passing serves as an intermediate form of testing the student's knowledge in all areas of pharmacology.

For passing the intermediate certification it is necessary:

1. Take out test works on sections 2, 3, 4 and 5, and to collect for each section not less than 61 points

2. To submit 4 colloquiums: written individual task on sections 1, 2, 3, 4 and 5, and to collect for each written task 61 points and

above, with an oral survey on these sections - 3 points or higher.

3. The presence of a personal form - 10 points

4. activity in practical classes - 5 points

5. Absence of "abs" in practical classes and lectures - 1 point

6. Preparation of the abstract for sections - 5 points

7. Participation in the NIRS - 15 points

The score for credit in 2 forms is "credited" or "unrecognized".

"Credited" - knowledge of the main educational material provided by the program, knowledge of the main literature, the fulfillment

of tasks provided by the forms of current control, the student must score at least 60 points, errors and inaccuracies in oral interviews

are possible, but the student must have the necessary knowledge to answer to leading questions of the teacher.

"Not honored" - a student for current control scored less than 60 points, 60% of missed practical and lecture classes; if at the oral

answer the student made gross errors in the answer, the incomplete answer, ignorance of two questions from three, refusal from

answer, use cribs. The student does not have practical skills.

Exam

For the exam, students who have scored 61 points or more for V and VI semesters are allowed.

Students who scored 86-100 points on the results of the current certification, who took part in the

research work of a student chairs and prepared reports, abstracts for student conferences, as well as prepared essays on themes of

independent work.

The form of the examination is oral questioning by ticket.

In the ticket there are 3 questions from different sections of pharmacology. Students' answers are assessed on a 5-point scale.

Behind each question is given a separate estimate (5, 4, 3, 2), which is summarized at the end. The student must receive a grade of 3

and above, to undergo intermediate certification after completing training in pharmacology.

Based on the results of the interim evaluation, the system of students' assessment is determined by the following assessments:

"Excellent", "good", "satisfactory" and "unsatisfactory". Positive estimates are recorded in the examination list and the record book,

an unsatisfactory grade is placed only in the examination statements.

Evaluations "excellent" deserve a student who has discovered a comprehensive, systematic and profound knowledge of educational-program material, the ability to freely perform assignments provided by the program, mastered the basic and familiar with the additional literature recommended by the program. As a rule, the score "excellent" is exposed students who have mastered the relationship of the basic concepts of pharmacology and their importance for the acquisition of a profession, manifested creative abilities in understanding, presentation and use of educational and program material.

The "well" deserves a student who has discovered a complete knowledge of the curriculum material successfully fulfilling the tasks specified in the program, having mastered the main literature recommended in the program.

The "good" score is awarded to students who have shown the systematic nature of knowledge in pharmacology and are capable of independent replenishment and updating them in the course of further academic work and professional activities.

Estimations "satisfactorily" deserve a student who has discovered the knowledge of the basic teaching-program material in necessary for further study and forthcoming work in the profession, cope with the implementation of tasks, provided by the program, familiar with the main literature recommended by the program. Usually, an assessment of "satisfactorily" is presented to

students who made inaccuracies in the answer to the examination and in the performance examination tasks.

Evaluation of "unsatisfactory" is exposed to the student, who discovered gaps in the knowledge of the basic educational-program material, which allowed fundamental mistakes in the implementation of the program's tasks.

As a rule, the assessment is "unsatisfactory" for students who can-not continue their studies or start to professional activity at the end of the university without additional classes in pharmacology.

If the student does not agree with the assessment, the appeal procedure is as follows: at the end of the exam, the student re-exams

commission with the participation of the head of the department, the head teacher and other teaching staff, the teacher who put out the initial assessment.

V. Recommendations for registration of the form of student medicines:

To study the formulary list of medicines required for each section of pharmacology.

Create a notebook or folder for registration.

For better memorization of international non-proprietary names of medicines and understanding structure of the provision of

information about medicines to the student is offered to issue a Personal Formulary medicines, a list of medicines for the form is

posted on the stand every semester, as well as is in the teaching and methodological recommendations. Also on the information

stands is information on Formulary list of medicines.

When formulating the form, use the Form of Essential Medicines of the Kyrgyz Republic (2011), electronic sources of information

on medicines (www.rlsnet.ru, www.drugs.com).

When preparing a form, include the following sections for medicines: pharmacodynamics, pharmacokinetics, indications for use and side effects.

Formulary in handwritten form.

VI. Recommendations for writing an essay

Control of independent work of the student on separate sections of pharmacology is carried out in the form of abstracts and reports

on the relevant topics of the sections of pharmacology.

Abstracts are made in the form of a manuscript, which sets out the formulation of the problem, the content of the study and its main

results. The text of the essay should demonstrate:

- acquaintance of the student with the main literature on the subject of the essay;
- the ability to highlight the problem and determine the methods for solving it;
- ability to consistently state the essence of the issues under consideration;
- possession of appropriate conceptual and terminological apparatus;
- an acceptable level of language literacy, including a functional style of presentation

The abstract should have the following structure: title page, table of contents, introduction, chapters, paragraphs, conclusion, list of

used literature, if necessary - applications. Numbers are assigned to all pages, starting with title page, page numbering is put on the second page.

The title page of the abstract should contain: the name of the faculty; specialty; the title of the essay topic; last name, name, patronymic of the author; surname, name, patronymic, teacher; month and year of the abstract.

The contents of the abstract are a sequential list of all headings, chapters, paragraphs of work with the indication of the pages on which the relevant paragraphs begin. Previously, the topic of the essay student must agree with the teacher. In one group, abstracts

with the same topics are not allowed plagiarism in the essay is unacceptable. Text is controlled for coincidence with external sources.