– 1. Working programm of educational discipline

–

– 1.1. Explanatory note

– **The mission of ISM IUK** *is to train competent specialists in the field of medicine that meet international standards and traditions of medical ethics, ready for continuous professional growth using modern achievements of science and practice, to solve public health problems.*

– **Annotation of the academic discipline**

Basic Pharmacology is an educational discipline containing the theoretical foundations of the pharmacokinetic and pharmacodynamic parameters of drugs.

Teaching basic pharmacology is carried out on the basis of generalizing scientific material from the standpoint of achieving mathematics, medicine, biology, genetics, immunology, chemistry, using data from modern methods of pharmacological research.

– **The purpose and objectives of the discipline**

The purpose of the discipline:the provision of high-quality medical education to increase the competitiveness of the school in the international educational space, based on scientific and innovative activities.

Discipline objectives:

- ✓ provision of high-quality vocational education based on a combination of its fundamental nature, high qualifications of the teaching staff;
- ✓ ensuring the process of training and professional development of healthcare professionals who are competitive on the international labor market;
- ✓ implementation of sectoral scientific and practical projects, high-tech science-intensive medical care, development of new diagnostic and treatment technologies for the science of the international health care system;
- ✓ ensuring the effective implementation of innovations in education and science, to meet the needs of the individual, society and the state.

The place of discipline in the structure of the main professional educational program of HPE.

Discipline"Basic Pharmacology" studied by students of the specialty General Medicine (for foreign citizens) and is included in basic part B3 of the professional block of the studied disciplines of the State Educational Standard of Higher Professional Education.

Discipline content "Basic Pharmacology" is based on the content of such prior disciplines as:

– Physiology.
– Anatomy
– Latin language
– Biochemistry
– Pathological anatomy
– Pathological physiology.

Subsequently, the knowledge gained in the course of studying the discipline "Basic Pharmacology", will be necessary in the study of disciplines:

– Clinical pharmacology
– Therapy
– Epidemiology.

– **Competencies of students, formed as a result of mastering the discipline, the planned results of mastering the discipline** -

Graduate of the specialty "General Medicine" with the assignment of the qualification of a specialist "general doctor "in accordance with the State Educational Institution of Higher Professional Education and HPE and the tasks of professional activity, must have the following professional competencies:

Code	Content of competence
PC-1	able to analyze the results of his own activities to prevent medical errors, while being aware of disciplinary, administrative, civil, criminal liability;
PC-4	is able to apply the methods of asepsis and antiseptics, use medical instruments, master the technique of caring for sick adults and children;
PC-5	is able to work with medical and technical equipment used in working with patients, own computer equipment, receive information from various sources, work with information in global computer networks, use the capabilities of modern information technologies to solve professional problems.

and additional professional competencies:

APC-5	is able to carry out a set of measures aimed at maintaining and strengthening health, preventing diseases using innovative technologies.

After mastering the discipline "Basic Pharmacology "student:

will know

• principles for the search for new drugs and scientific approaches to the creation of drugs, general ideas about the manufacture of drugs by the chemical and pharmaceutical industry;
• the state system for the examination of trials of new drugs;

• general principles of pharmacokinetics and pharmacodynamics of drugs, factors that change them, the main undesirable and toxic reactions;
• classification and characteristics of the main groups of drugs, pharmacodynamics and pharmacokinetics, indications and contraindications for the use of drugs; types of dosage forms, doses of individual drugs, pharmaceutical and pharmacological incompatibility;
• the main adverse reactions of the most common drugs, their identification, methods of prevention and correction;
• general principles for the preparation of prescriptions and the preparation of prescriptions for medicines, generally accepted abbreviations and designations in prescriptions, the use of the Latin language, rules for the storage and use of medicines.

will be able to

distinguish between the concepts of dosage form, medicinal substance, medicinal product, medicinal product, medicinal raw material, biologically active additive (BAA) to food, homeopathic remedy;
• to analyze the action of medicinal products in terms of the totality of their pharmacological properties and the possibility of their use for therapeutic treatment;
• assess the possibilities of using drugs for pharmacotherapy;
• write prescriptions for medicines; use various dosage forms in the treatment of certain pathological conditions, based on the characteristics of their pharmacodynamics and pharmacokinetics;
• to assess the possibility of the toxic effect of drugs and methods of therapy for drug poisoning;
• write a medical prescription for a specific drug;
• conduct a search on pharmacology using information sources - reference books, databases, Internet resources.

will own

• skills in the use of medicines in the treatment, rehabilitation, prevention and diagnosis of various diseases and pathological conditions;
• the skill of choosing a drug based on the combination of its pharmacological properties, mechanisms and localization of action and the possibility of replacing drugs from other groups;
• the skills of choosing a certain dosage form, dose and route of administration of drugs, taking into account the pathological condition;
• skills in predicting the possible interaction of drugs with the combined use of various drugs;
• skills in prescribing drugs in prescriptions for certain pathological conditions, based on the characteristics of pharmacodynamics and pharmacokinetics;
• the basics of medical measures for the provision of first aid for urgent and life-threatening conditions, acute drug poisoning.

will understand

• distinguish between the concepts of dosage form, medicinal substance, medicinal product, medicinal product, medicinal raw material, biologically active additive (BAA) to food, homeopathic remedy;
• selection of a drug based on the combination of its pharmacological properties, mechanisms and localization of action and the possibility of replacing drugs from other groups;
• predicting the possible interaction of drugs in the combined use of various drugs;
will use
• search on pharmacology issues using sources of information - reference books, databases, Internet resources.
• research of new drugs and scientific approaches to the creation of drugs.
will implement
• collection, search for information in medical systems, use information computer systems in medicine and healthcare
• possible undesirable side reactions when using medicinal products and carry out their correction.
will analyze
• the action of drugs in terms of the totality of their pharmacological effects, mechanisms and localization of action, pharmacokinetic parameters and the possibility of their use for prevention and treatment, incl. in case of emergency conditions at the prehospital stage, in emergency situations, epidemics, in foci of mass destruction, in case of occupational diseases (poisoning).
will synthesize
• prescribing drugs in prescriptions for certain pathological conditions, based on the characteristics of pharmacodynamics and pharmacokinetics;
• selection of a specific dosage form, dose and route of administration of drugs, taking into account the pathological condition.

will evaluate
• the possibility of choosing and using drugs on the basis of ideas about their properties, peculiarities of interaction for the purposes of effective and safe pharmacotherapy of diseases of individual systems of the human body.

1.2. Recommended educational technologies

For the development of students of the academic discipline "Basic Pharmacology", obtaining knowledge and forming professional competencies, the following educational technologies are used:

- lecture-electronic presentation,
- lesson-conference,
- training,
- brainstorm,
- small group method,
- participation in scientific and practical conferences, congresses, symposia,

- student research work,
- written analytical work
- preparation and defense of abstracts,
- distance educational technologies.

1.3. Total volume and types of educational work

According to the curriculum 2020	**3 sem.**	**4 sem.**	**Total**	
			in hours	**in credits**
Total labor intensity	**120 h**	**90 h**	**210 h**	**7**
Classroom work	72	54	126	
Lectures	36	36	72	
Practical lessons	36	18	54	
Seminars				
Laboratory works				
Independent work				
SIW	30	18	48	
SIWT	18	18	36	
Final control type	Module	exam		

1.4. Discipline structure

1.4.1. Thematic plan for the study of the discipline (by semester)

No.	Name sections and topics disciplines (lectures and practical exercises)	Auditory lessons				Total hours on classroom work	SRSP	Student independent work	Formed competence	Used educational technologies, methods and methods of teaching	Forms of current and midterm control academic performance
		lectures	seminars	practical lessons	laboratory works						
	Module 1 “General recipe. General Pharmacology ".			*2*	*2*	*2*	*2*	*2*	*PC-1, PC-4, PC-5, DPK-5*		*T*
1	Introduction to Pharmacology. Recipe. Solid dosage forms.			*2*		*2*	*2*	*2*	*PC-1, PC-4, PC-5, DPK-5*	*LV / PL ZK, R*	*NS,*
2	Soft dosage forms. Solutions for external and internal use.			*2*		*2*	*2*	*2*	*PC-1, PC-4, PC-5, DPK-5*	*LV / PL ZK, R*	*NS,*
3	Liquid dosage forms. Dosage forms for injection.			*2*		*2*	*2*	*2*	*PC-1, PC-4, PC-5, DPK-5*	*LV / PL ZK, R*	*NS ZS*

4	General pharmacology. The concept of drug pharmacokinetics. The concept of pharmacodynamics of drugs. Side effects of medicines. The concept of INN. Generic drugs. Bioequivalence. Therapeutic and generic drug substitution ..	*4*		*2*		*4*	*2*	*2*	*PC-1, PC-4, PC-5, DPK-5*	*LV / PL ZK, R*	*NS, ZS*
5	Introduction to Pharmacology. History of Pharmacology.	*2*							*PC-1, PC-4, PC-5, DPK-5*		
6	Drug interaction. Types of interaction.	*2*		*2*		*4*	*2*	*2*	*PC-1, PC-4, PC-5, DPK-5*	*LV / PL ZK, R*	*NS,*
7	Module 2 "Drugs affecting the peripheral nervous system."			*2*		*2*	*2*	*2*	*PC-1, PC-4, PC-5, DPK-5*		*T*
eight	Drugs affecting the afferent nervous system.	*2*		*2*		*4*	*2*	*2*	*PC-1, PC-4, PC-5, DPK-5*	*LV / PL ZK, R*	*NS,*
nine	Cholinergic substances. M-N-cholinomimetic agents. M-cholinomimetics. M-anticholinergics. Anticholinesterase drugs.	*2*		*2*		*4*	*2*	*2*	*PC-1, PC-4, PC-5, DPK-5*	*LV / PL ZK, R*	*NS,*
ten	Cholinergic substances. H-cholinomimetic agents. H-anticholinergic drugs.	*2*		*2*		*4*	*2*	*2*	*PC-1, PC-4, PC-5, DPK-5*	*LV / PL ZK, R*	*NS,*
eleven	Adrenomimetics. Adrenergic blocking agents	*2*		*2*		*4*	*2*	*2*	*PC-1, PC-4, PC-5, DPK-5*	*LV / PL ZK, R*	*NS,*
12	*Module No. 3 by section*"Drugs affecting the central nervous system"			*2*		*2*	*2*	*2*	*PC-1, PC-4, PC-5, DPK-5*	*LV / PL ZK, R*	*T*
13	Anesthesia products	*2*		*2*		*4*	*2*	*2*	*PC-1, PC-4, PC-5, DPK-5*	*LV / PL ZK, R*	*NS,*
fourteen	Ethanol. Sleeping pills. Antiepileptic and antiparkinsonian drugs.	*2*		*2*		*4*	*2*	*2*	*PC-1, PC-4, PC-5, DPK-5*	*LV / PL ZK, R*	*NS,*

15	Analgesics: Narcotic and non-narcotic analgesics.	*2*		*2*		*4*	*2*	*2*	*PC-1, PC-4, PC-5, DPK-5*	*LV / PL ZK, R*	*NS,*
16	Psychotropic drugs with a depressing type of action. Psychotropic drugs with a stimulating type of action.	*2*		*2*		*4*	*2*	*2*	*PC-1, PC-4, PC-5, DPK-5*	*LV / PL ZK, R*	*NS,*
17	*Module 4* "Drugs affecting the cardiovascular system"	*2*		*2*		*4*	*2*	*2*	*PC-1, PC-4, PC-5, DPK-5*		*T*
eighteen	Drugs used in coronary heart disease.	*2*		*2*		*4*	*2*	*2*	*PC-1, PC-4, PC-5, DPK-5*	*LV / PL ZK, R*	*NS,*
19	Cardiotonic drugs.	*2*		*2*		*4*	*2*	*2*	*PC-1, PC-4, PC-5, DPK-5*	*LV / PL ZK, R*	*NS,*
twenty	Antihypertensive drugs	*2*		*2*		*4*	*2*	*2*	*PC-1, PC-4, PC-5, DPK-5*	*LV / PL ZK, R*	*NS,*
21	Diuretics	*2*		*2*		*4*	*2*	*2*	*PC-1, PC-4, PC-5, DPK-5*	*LV / PL ZK, R*	*NS,*
22	Module No. 5 on the section "Means affecting the processes of tissue metabolism and functions of executive organs"	*2*		*2*		*4*	*2*	*2*	*PC-1, PC-4, PC-5, DPK-5*		*T*
23	Drugs affecting the functions of the respiratory system.	*2*		*2*		*4*	*2*	*2*	*PC-1, PC-4, PC-5, DPK-5*	*LV / PL ZK, R*	*NS,*
24	Means that affect the functions of the digestive system.	*2*		*2*		*4*	*2*	*2*	*PC-1, PC-4, PC-5, DPK-5*	*LV / PL ZK, R*	*NS,*
25	Funds affecting the hematopoietic system.	*2*		*2*		*4*	*2*	*2*	*PC-1, PC-4, PC-5, DPK-5*	*LV / PL ZK, R*	*NS,*
26	Vitamin preparations. Hormonal drugs.	*2*		*2*		*4*	*2*	*2*	*PC-1, PC-4, PC-5, DPK-5*	*LV / PL ZK, R*	*NS,*
27	Module No. 6 on the section "Anti-inflammatory, anti-allergic, chemotherapeutic agents."			*2*		*24*	*2*	*2*	*PC-1, PC-4, PC-5, DPK-5*		*T*
28	Anti-inflammatory drugs. Antiallergic drugs.	*2*		*2*		*4*	*2*	*2*	*PC-1, PC-4, PC-5, DPK-5*	*LV / PL ZK, R*	*NS,*
29	Chemotherapy drugs. Antibiotics Sulfanilamide preparations. Synthetic antimicrobial agents of various chemical structures.	*2*		*2*		*4*	*2*	*2*	*PC-1, PC-4, PC-5, DPK-5*	*LV / PL ZK, R*	*NS,*

	Anti-tuberculosis drugs. Anti-spirochete and antiviral agents. Antiseptic and disinfectants.	*2*		*2*		*4*	*2*	*2*	*PC-1, PC-4, PC-5, DPK-5*	*LV / PL ZK, R*	*NS,*
thirty	*Module 6* under the section "Anti-inflammatory, anti-allergic, chemotherapeutic agents."	*2*		*2*		*4*	*2*	*2*	*PC-1, PC-4, PC-5, DPK-5*	*LV / PL*	*NS.*
31	Test, exam	*2*		*2*		*4*	*2*	*2*	*PC-1, PC-4, PC-5, DPK-5*	*LV / PL ZK, R*	*NS,*

Abbreviation for designations of educational technologies, methods and methods of teaching:*traditional lecture (L), lecture-visualization (LP), problem lecture (LP), lecture-press conference (LPK), lesson-conference (LC), training (T), debate (D), brainstorming (MSH) , master class (MC), "round table" (CC), activation of creative activity (ATD), regulated discussion (RD), forum type discussion (F), business and role-playing educational game (CI, RI), small group method (MG), classes using simulators, simulators (TP), computer simulation (CS), analysis of clinical cases (CS), preparation and protection of medical history (IB), use of computer training programs (COP), interactive atlases (IA), attending medical conferences, consultations (VC), participation in scientific and practical conferences (NPK), congresses, symposia (Sim), educational and research work of a student (UIRS), conducting subject Olympiads (O),preparation of written analytical works (AR), preparation and defense of abstracts (P), design technology (PT), excursions (E), distance educational technologies (DOT).*

Reducing the forms of current and midterm monitoring of academic performance: *T - testing, Pr - assessment of the development of practical skills (abilities), 3C - solving situational problems, KP - control work, K3 - control task, IB - writing and protecting a case history, CL - writing and protecting a curatorial sheet, R - writing and defense of the abstract, C - interview on control questions, D - preparation of a report, etc.*

1.4.2. Organization of students' independent work

No.	Topics of students' independent work	SRS task	Recommended liter	Delivery time (weeks)
1	1. Side effects of medicines (drugs). 2. Classification of side effects. 3. Allergic and non-allergic side effects. 4. Interaction of drugs. 5. Pharmacological interaction of drugs 6. Pharmaceutical interaction of drugs.	Report, presentations (analysis of terminology)	Abstract: 1. lecture material; 2. KD Tripathi "Essentials of medical pharmacology"; 3.Lippincott "Modern pharmacology with clinical applications"; 4.US Food & Drug Administration http://www.fda.gov/oc/oha/default.htm.	**15**
2	1. General	Report,	Abstract:	**6 - 11**

	characteristics of local anesthetics. 2. Algorithm for first aid in anaphylactic shock. 3. The effect of nicotine on the body. Modern methods of smoking cessation treatment. 4. Distracting effect of irritating agents.	presentations (analysis of terminology).	1. lecture material; 2. KD Tripathi "Essentials of medical pharmacology"; 3.Lippincott "Modern pharmacology with clinical applications"; 4.US Food & Drug Administration http://www.fda.gov/oc/oha/default.htm.	
3	1. Acute alcohol poisoning. Treatment. 2. Chronic alcohol poisoning. Social aspects of alcoholism. Treatment. 3. Modern antiepileptic funds.. 4. Modern antiparkinsonian drugs. ...	Report, presentations (analysis of terminology)	Abstract: 1. lecture material; 2. KD Tripathi "Essentials of medical pharmacology"; 3.Lippincott "Modern pharmacology with clinical applications"; 4.US Food & Drug Administration http://www.fda.gov/oc/oha/default.htm.	**10-14**
4	1. Factors contributing to the development of cardiovascular diseases. 2. Modern antiatherosclerotic drugs. 3. Lipid-lowering drugs.	Report, presentations (analysis of terminology)	Abstract: 1. lecture material; 2. KD Tripathi "Essentials of medical pharmacology"; 3.Lippincott "Modern pharmacology with clinical applications"; 4.US Food & Drug Administration http://www.fda.gov/oc/oha/default.htm.	**1**
5	1. Uricosuric funds. 2. Vitamins. 3. Acids and alkalis. 4. Enzyme preparations.	Report, presentations (analysis of terminology)	Abstract: 1. lecture material; 2. KD Tripathi "Essentials of medical pharmacology"; 3.Lippincott "Modern pharmacology with clinical applications"; 4.US Food & Drug Administration http://www.fda.gov/oc/oha/default.htm.	**1**
6	1. The history of the discovery of chemotherapeutic agents. 2. Immunotropic drugs. 3. Synthetic antimicrobial agents of different chemical structure. 4. Antiseptics and disinfectants.	Report, presentations (analysis of terminology).	Abstract: 1. lecture material; 2. KD Tripathi "Essentials of medical pharmacology"; 3.Lippincott "Modern pharmacology with clinical applications"; 4.US Food & Drug Administration http://www.fda.gov/oc/oha/default.htm.	**1**

No.	Topics of students' independent work	SRS task	Recommended liter	Deliver y time (weeks)
1	7. Side effects of medicines (drugs). 8. Classification of side effects. 9. Allergic and non-allergic side effects. 10. Interaction of drugs. 11. Pharmacological interaction of drugs 12. Pharmaceutical interaction of drugs.	Report, presentations (analysis of terminology)	Abstract: 1. lecture material; 2. KD Tripathi "Essentials of medical pharmacology"; 3.Lippincott "Modern pharmacology with clinical applications"; 4.US Food & Drug Administration http://www.fda.gov/oc/oha/default.htm.	**15**
2	5. General characteristics of local anesthetics. 6. Algorithm for first aid in anaphylactic shock. 7. The effect of nicotine on the body. Modern methods of smoking cessation treatment. 8. Distracting effect of irritating agents.	Report, presentations (analysis of terminology).	Abstract: 1. lecture material; 2. KD Tripathi "Essentials of medical pharmacology"; 3.Lippincott "Modern pharmacology with clinical applications"; 4.US Food & Drug Administration http://www.fda.gov/oc/oha/default.htm.	**6 - 11**

1.4.3. Evaluative Assessment Tools

- **Current and milestone (modular) control**

Current control of students' knowledge represents:

- oral questioning;
- solving situational tasks;
- assessment of the development of practical skills on dummies;
- control task; test;
- checking the completion of written homework;
- checking abstracts, reports, presentations.

Topics of abstracts (reports, presentations):

- history of the development of pharmacology;

- side effects of local anesthetics;
- the use of anticholinesterase drugs;
- the effect of nicotine on the human body;
- the use of antidepressants in pediatrics;
- selective serotonin inhibitors;
- social aspects of alcoholism, modern methods of treating alcoholism;
- antiarrhythmic drugs;
- lipid-lowering drugs;
- uterine products;
- uricosuric agents;
- antiprotozoal drugs;
- antifungal agents;
- immunostimulants and immunosuppressants.

Approximate situational tasks for the discipline:

Write out in prescriptions:

1. 20 powders of pentoxyl (Pentoxylum) 50 mg each. Take 1 powder 3 times daily after meals.
2. 12 complex powders containing Platyphyllini hydrotartras 3 mg and Papaverini hydrochloridum 30 mg. 1 powder 2 times a day.
3. 50 pills "Undevit" ("Undevitum"). 1 tablet 2 times a day.
4. 25.0 sodium sulfate (Natrii sulfas). Take at one time, after dissolving in ¼ glass of water, drink 1 glass of water.
5. 10 tablets of furazolidone (Furazolidonum) 0.05 each. Take 2 tablets 3 timesday..
6. 60 softgels containing 0.4 each Pyracetamum. Assign 1 capsule 3 times a day.
7. 10 tablets of chlordiazepoxidum (Chlordiazepoxidum) 5 mg each. Prescribe 1 tablet 2 times a day.

eight. 50 capsules "Venoruton" ("Venoruton"), 0.3 each. Take 1 capsule 2 times daily.

nine. 30 Pikovit lozenges. 1 lozenge 3 times a day.

ten. 100 capsules "Nitro mac" ("Nitro mac") 5 mg each. 1 capsule 3 times a day.

eleven. 20 powders of thyroidinum (Thyreoidinum), 20 mg each. 1 powder 3 times a day.

12. 40 powders of folic acid (Acidum folicum) 0.001 each. Take 1 powder 2 times a day.
13. 40 tablets of nystatin (Nystatinum), 250,000 units each. Take 1 tablet 4 times daily.

fourteen. 25 ml of 10% streptocid liniment (Streptocidum). For application to affected areas.

15. 10 rectal suppositories with erythromycin (Erythro-mycinum), 100 mg each. 1 suppository 2 times a day.
16. 50 ml 0.2% furacilin liniment (Furacilinum). Outside.
17. 20.0 Nayz gel. Apply in a thin layer on a previously washed and dried skin surface in the area of the painful area 2-3 times a day for 5 days.

eighteen. 50.0 ointment containing 1% chloramphenicol (Laevomycetinum) and 5% levorin(Levorinum). Outside.
19. 30.0 paste containing 10% streptocide (Streptocidum) and 1% boric acid(Acidum boricum). Outside.
twenty. 10 rectal suppositories containing anesthesin (Anesthesinum), 0.1 each; dermatol (Dermatolum) 0.04; zinc oxide (Zinci oxydum) 0.02 each; menthol (Mentholum) 0.04 each. Assign 1 suppository into the rectum 2 times a day.
21. 50.0 ointment containing 2% tetracycline (Tetracyclinum) and 4% nystatin (Nystatinum). Outside.
22. 30.0 ointment containing 5% anesthesin (Anaesthesinum) and 1% chloramphenicol(Laevomycetinum). Outside.
23. twenty rectal suppositories containing 0.2 theophylline (Theophyllinum). Assign 1 suppository into the rectum 2 times a day.
24. 50 ml of synthomycin liniment (Synthomycinum) 1%, containing 0.5%novocaine (Novocainum). Lubricate the affected surface
25. 30.0 ointment containing 1% diphenhydramine (Dimedrolum), 10% streptocide (Streptocidum), 5% zinc oxide (Zinci oxydum). Outside.
26. 50.0 paste containing 5% anesthesin (Anesthesinum). Outside.
27. 20 rectal suppositories containing 0.12 novocaine (Novocainum) and 0.015 dry extract of belladonna (Extractum Belladonnae siccum). 1 suppository into the rectum 3 times a day.
28. 100 ml of liniment containing Xeroformium and Vinylinumequal to 5.0 in castor oil (Oleum Ricini). Outside.
29. 12 rectal suppositories containing 0.01 belladonna extract (Extractum Belladonnae) and 0.2 each dermatol (Dermatolum). Apply 1 suppository in the morning and at night.
thirty. 100 ml of aloe liniment (Aloë). Outside.
31. 30 ml drops, which include: tincture of lily of the valley (Tinctura Convallariae) and tincture of valerian (Tinctura Valerianae) in equal volumes. Take 20 drops 2 times a day for vegetative neuroses.
32. 200 ml infusion of 20 g of chamomile flowers (Flores Chamomillae) for oral administration 1 tablespoon 3 times a day.
33. 25 ml of tincture of St. John's wort (Tinctura Hyperici). Take 30 drops in 1/2 cup of water for mouthwash.
34. 130 ml of a mixture containing 3 g of potassium iodide (Kalii iodidum) and 4 g of sodium bromide (Natrii bromidum). Take 1 tablespoon 3 times a day. Calculate single doses of the drug.
35. 100 ml of 0.1% solution of potassium permanganate (Kalii permanganas) for washing wounds. To issue in expanded and abbreviated ways.
36. 100 ml of 5% aminocaproic acid solution (Acidum aminocaproicum) for intravenous administration. To issue in expanded and abbreviated ways.
37. 5 ampoules of 10% solution of novocainamide (Novocainamidum), 5 ml each for intramuscular administration. Calculate the volume of the injected solution for a patient weighing 50 kg, if a single dose is 10 mg / kg.

38. 10 ml of 1% alcoholic solution of nitroglycerin (Nitro-glycerinum). Take 2 drops of sugar during an attack of pain in the region of the heart. Calculate a single dose of the drug.
39. 200 ml of infusion of 20 g of sage leaves (Folia Salviae) for rinsing the mouth.
40. 25 ml of tincture of eucalyptus (Tinctura Eucalypti) for rinsing the mouth, 1 teaspoon per glass of warm water.
41. 200 ml of a mixture containing 150 ml of infusion of 5 g of rhubarb roots (Radices Rhei), sodium sulfate (Natrii sulfas), 3 g each, and sugar syrup. Take 1 tablespoon 2 times a day.
42. 40 ml of calendula tincture (Calendula). Dilute 1 teaspoon of the tincture in a glass of water. For rinsing the mouth and throat.
43. 10 ampoules of 1% solution of diphenhydramine (Dimedrolum), 1 ml for intramuscular administration. Calculate the volume of the injected solution if a single dose is 5 mg.
44. 200 ml of 10% potassium chloride solution (Kalii chloridum). Take 1 tablespoon 3 times a day. Calculate a single dose of the drug.
45. 25 ml extract of shepherd's purse (Bursa pastoris) liquid. Prescribe 20 drops 3 once a day.
46. 25 ml of viburnum extract (Extractum Viburni) liquid for oral administration 20 drops 2 times a day.
47. 100 ml of 20% Chlorophylliptum in oil. For external use.
48. 200 ml of 0.5% solution of Protargolum (Protargolum) for washing the bladder.
49. 100 ml of camphor-valerian drops, which include: camphor (Camphora) 10.0 and valerian tincture (Tinctura Valerianae) up to 100 ml. Take orally 20 drops 3 times a day for chronic cardiovascular failure.
50. 50 ml of stomach drops, which include: tincture of mint (Tinctura Menthae), tincture of wormwood (Tinctura Absinthii), tincture of valerian (Tinctura Valerianae) in a ratio of 3: 3: 4. Take 20-25 drops 3 times a day with meals.
51. 10 tablets of pentalgin (Pentalginum). 1 tablet for headache.
52. 12 Complex Powders Containing Papaverine Hydrochloride (Papaverini hydrochloridum) 0.02 and phenobarbital (Phenobarbitalum) 0.05. 1 powder 3 times a day.
53. 30 tablets "No-Spa" ("No-Spa"), 40 mg. 1 tablet 3 times a day.
54. 100 tablets of cinnarizin (Cinnarizinum) 25 mg each. Assign 1 tablet 3 times a day after meals.
55. 10 tablets containing 0.25 each (Theobrominum) and 0.25 dibazol (Dibazolum). By 1 tablet 2 times a day.
56. 20 powders of riboflavin (Riboflavinum) 0.003 each. Take 1 powder 3 times a day.
57. 50 powders containing rutin (Rutinum) with ascorbic acid (Acidum ascorbicum) 50 mg each. 1 powder 2 times a day.
58. 50 powders containing riboflavin (Riboflavinum) 10 mg each, thiamine bromide (Thiamini bromidum) 20 mg each, ascorbic acid (Acidum ascorbicum) 50

mg each. 1 powder 3 times a day.
59. 50 tablets of tetravit (Tetravitum). 1 tablet 2 times a day.
60. 10 powders of diphenhydramine (Dimedrolum), 0.01 per dose. 1 powder 3 times a day.

Frontier (modular) control represents:
- testing by section (computer).

- **Final control**

Final control at the end of the study of the academic discipline, it is carried out in the form of a test, which exhibited based on the results of midterm (modular) control over the discipline.

Questions to control the final level of knowledge of students

1. The recipe, its structure. Rules for the preparation of recipes.
3.General principles of preparation of prescriptions and preparation of prescriptions for medicines.
5. Dosage forms, their classification.
6. Solid dosage forms. General characteristics, composition, rules for prescribing powders.
7. Soft dosage forms. General characteristics, composition, prescription rules.
8. Liquid dosage forms. General characteristics, composition, prescription rules.
9. Use of the Latin language. WHO concept of essential (essential) medicines.
10. The concept of international non-proprietary (generic) names of medicines. WHO recommendations on the use of generic names of medicines. Generic drugs. Requirements for generic drugs.
11. Determinants of the selection of essential medicines.
12. Pharmacokinetics of drugs. Routes of drug administration.
13. Basic mechanisms of suction.
14. Distribution of drugs in the body. Biological barriers. Escrow.
15. Bioavailability. Factors affecting the bioavailability of certain groups of drugs. Bioequivalence of medicines.
16. The transformation of drugs in the body.
17. Ways of removing drugs from the body.
18. The half-life of drugs. Clearance (general, renal, hepatic).
19. Pharmacodynamics of drugs. Basic principles of action of medicinal substances, types of action of medicinal substances (local, reflex, resorptive).
20. Dependence of pharmacokinetic properties on the chemical structure and physicochemical properties of medicinal substances.
21. The dependence of the pharmacological effect on the dose of the active substance. Types of doses. The breadth of the therapeutic action.
22. Changes in the action of medicinal substances with repeated injections. Addiction (tolerance), tachyphylaxis.

23. Material and functional cumulation. Sensitization. Drug addiction (mental, physical).
24. The combined effect of drugs. Synergism (summation, potentiation). Antagonism Antidote
25. Allergic and non-allergic side effects.
26. The toxic effect of medicinal substances. Teratogenicity. Mutagenicity. Carcinogenicity.
27. Complications associated with side effects of drugs (hepatotoxic and ulcerogenic effects).
28. Complications associated with side effects of drugs (neurotoxic and nephrotoxic effects).
29. Complications associated with the patient's hypersensitivity to drugs (variants of allergic reactions).
30. Factors that enhance the undesirable effect of drugs.
31. Measures to prevent acute drug poisoning.
32. General characteristics, classification of drugs that affect the afferent nervous system.
33. The concept of local anesthetic action. Types of anesthesia. Classification of local anesthetics by chemical structure, by indications for use. Localization and mechanism of action of local anesthetics. Requirements for local anesthetics and comparative characteristics of drugs from each group. Indications for the use of local anesthetics.
34. Astringents (tannin, basic bismuth nitrate). Classification, pharmacokinetic and pharmacodynamic properties of astringents. Indications for use and side effects.
35. Coating agents (mucus from starch and flax seeds). Operating principle. Application.
36. Adsorbing agents (activated carbon). Operating principle. Application.
37. Irritants (ammonia solution, menthol, mustard plasters). The effect of irritants on the skin and mucous membranes. The meaning of the reflexes arising in this case. "Distracting" effect. Trophic action. Indications for use. Side effects
38. Anatomical and physiological features of the autonomic nervous system.
39. The chemical component of the transmission of a nerve impulse, the concept of neurotransmitters. Division of cholinergic receptors into muscarinic and nicotine-sensitive (M- and H-cholinergic receptors, their subtypes), their localization and effects associated with their excitation.
40. Classification of agents affecting the transmission of excitation in cholinergic synapses.
41. 50. M-N-cholinomimetic drugs. MN- cholinomimetics, localization and mechanism of action. Pharmacokinetics, main pharmacological effects. Indications for use and side effects.
42. Anticholinesterase drugs. The nature of the interaction with acetylcholinesterase. Classification of anticholinesterase drugs. Localization, mechanism of action and main effects. Features of the action of organophosphorus compounds (armin). Indications for use. Acute poisoning and relief measures.

43. The use of cholinesterase reactivators for poisoning with organophosphorus compounds.
44. M-cholinomimetic agents. Effects arising from excitation of different subtypes of M-cholinergic receptors.
45. M-anticholinergic 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 -cholinoreceptors. Acute poisoning with M - anticholinergics and relief measures.
46. The concept of H-cholinergic receptors, subtypes of H-cholinergic receptors and their localization. Classification of drugs that affect H-cholinergic receptors.
47. H-cholinomimetic agents, Physicochemical characteristics, pharmacokinetics, localization and mechanism of action. Main pharmacological effects. Indications for use. The toxic effect of nicotine. The use of H-cholinomimetic drugs.
48. H-blockers ganglion blockers. Classification, physicochemical characteristics, pharmacokinetics, localization and mechanism of action. The main pharmacological effects of ganglion blockers. Indications for use. Side effects and their prevention.
49. Drugs blocking neuromuscular transmission (curariform drugs). Classification. Physicochemical characteristics, localization and mechanism of action of depolarizing and antidepolarizing muscle relaxants.
50. Pharmacokinetics, main pharmacological effects. Muscle relaxants of central action. Indications for use. Side effects.
51. Measures of assistance in case of overdose of curariform drugs. The use of anticholinesterase drugs in case of an overdose of muscle relaxants.
52. Adrenergic receptors, their types, localization, pharmacological effects due to their stimulation and blocking. The concept of receptor selectivity.
53. Biosynthesis and metabolism of catecholamine mediators. The mechanism of impulse transmission in adrenergic synapses.
54. Classification of adrenergic (adrenomimetics) and antiadrenergic (adrenergic blockers) drugs.
55. Localization, mechanism of action, pharmacological effects, indications for use, side effects, comparative characteristics of direct adrenomimetics.
56. Localization, mechanism of action, pharmacological effects, indications for use, side effects, comparative characteristics of α-blockers (selective and non-selective).
57. Localization, mechanism of action, pharmacological effects, indications for use, side effects, comparative characteristics of β-blockers (selective and non-selective).
58. Localization, mechanism of action, pharmacological effects, indications for use, side effects, comparative characteristics of sympatholytics.
59. The concept of anesthesia and the breadth of narcotic action, the main goals of general anesthesia, theory of anesthesia. Possible mechanisms of general anesthetic action of drugs for anesthesia. Classification of drugs for anesthesia.
60. Means for inhalation anesthesia, general characteristics of the group, mechanism of action, pharmacological effects, indications for use and side effects.

61. Means for non-inhalation anesthesia, general characteristics of the group, mechanism of action, pharmacological effects, indications for use and side effects.
62. Types of anesthesia, concept of premedication, principles of combined anesthesia, complications during and after anesthesia.
63. The effect of ethanol on the central nervous system, on the cardiovascular system, excretory system, liver. Energy value of ethanol. The local effect of ethanol on the skin and mucous membranes. Antimicrobial action of ethanol. The use of ethanol in medical practice.
64. Toxicological characteristics of ethanol. Acute ethanol poisoning and treatment. Alcoholism and its social aspects. Pharmacotherapy of alcoholism (disulfiram).
65. Classification of hypnotics. The effect of sleeping pills on the structure of sleep. Possible mechanisms of hypnotic action.
66. Derivatives of benzodiazepine with a pronounced hypnotic effect.
67. Derivatives of barbituric acid, classification, features of pharmacodynamics and pharmacokinetics.
68. Hypnotics of different chemical groups (zopiclone, chloral hydrate).
69. Acute poisoning with hypnotics, the principles of its pharmacotherapy. Antagonists of hypnotics, benzodiazepine series (flumazenil) and barbiturates (bemegrid).
70. Classification of antiepileptic drugs. Possible mechanisms of action. Comparative assessment of the effectiveness of individual drugs in different forms of epilepsy. Side effects.
71. Classification of antiparkinsonian drugs. Basic principles of pharmacological correction of extrapyramidal disorders. Mechanisms of action of antiparkinsonian drugs that stimulate dopaminergic processes. MAO-B inhibitors (selegiline).
72. Comparative assessment of the effectiveness of individual drugs.
73. The use of DOPA-decarboxylase inhibitors (carbidopa, benserazide), blockers of peripheral dopamine receptors. Side effects of antiparkinsonian drugs.
74. General characteristics of analgesics. Classification of narcotic analgesics. Pain-relieving mechanisms of opioid analgesics, interactions with different subtypes
75. Effects due to the influence on the central nervous system. Influence on the activity of internal organs (cardiovascular system, gastrointestinal tract), etc. Indications for the use of opioid analgesics.
76. Side effects. Addiction, drug addiction.
77. Acute opioid analgesic poisoning, assistance measures. An opioid analgesic antagonist (naloxone). Operating principle. Application.
78. Non-opioid analgesics are predominantly centrally acting. Sodium channel blockers (carbamazepine), monoamine reuptake inhibitors (amitriptyline, imipramine), α2 - adrenomimetics (clonidine), NMDA receptor antagonists (ketamine), GABA-β - mimetics. Pain-relieving mechanisms. Differences between otopioid analgesics. Application.
79. Classification of non-narcotic analgesics. Mechanisms of the analgesic action of non-narcotic analgesics. Comparative characteristics of non-narcotic analgesics

from different chemical groups (salicylates, pyrazolone and paraaminophenol derivatives). Indications for use. Side effects.

80. Acute paracetamol poisoning, measures of assistance.

81. General characteristics of psychotropic drugs, classification.

82. Classification of antipsychotics. Characteristics of individual groups of antipsychotics depending on chemical engineering. Pharmacokinetics of antipsychotics. Points of application and the principle of action of antipsychotics on the exchange of dopamine, serotonin and norepinephrine in the central nervous system.

83. Typical antipsychotics. Pharmacokinetics and pharmacodynamics, comparative characteristics, indications for use, side effects.

84. "Atypical" antipsychotics (clozapine, sulpiride). Pharmacokinetics and pharmacodynamics, comparative characteristics, indications for use, side effects.

85. Normotimics. Lithium salts. Possible mechanisms of action. Pharmacokinetics and basic pharmacological effects of lithium salts. Indications for use, side effects.

86. Classification of anxiolytics (tranquilizers). Pharmacokinetics, pharmacodynamics, anxiolytics, indications for use.

87. Anxiolytics of the benzodiazepine series, general characteristics. The concept of benzodiazepine receptors, ichligands. Pharmacokinetics and pharmacodynamics of anxiolytics of benzodiazepine structure.

88. Anxiolytics of the non-benzodiazepine series. Pharmacokinetics and pharmacodynamics, indications for use, side effects.

89. Possibility of drug dependence when using anxiolytics. The benzodiazepine antagonist is flumazenil.

90. General characteristics of sedatives, mechanism of action, pharmacokinetics and pharmacodynamics of drugs. Indications for use and side effects.

91. General characteristics and classification of antidepressants.

92. Inhibitors of the neuronal reuptake of monoamines are substances of indiscriminate action. Physicochemical and pharmacokinetic characteristics, localization and mechanism of action. Influence on dopaminergic, adrenergic, cholinergic neurotransmitter systems of the brain. Peripheral neurotropic effects. Indications for use and side effects.

93. Selective inhibitors of neuronal serotonin reuptake. Features of the spectrum of pharmacological action. Indications for use, side effects.

94. Irreversible (nialamide) and reversible MAO inhibitors. Physicochemical, pharmacokinetic characteristics, localization and mechanism of action. Basic pharmacological properties. Selective MAO inhibitors (moclobemide). Pharmacodynamics, indications for use.

95. Psychostimulants, their classification. Physicochemical, pharmacokinetic characteristics, Possible mechanisms of psychostimulating action. Main pharmacological effects, influence on the cardiovascular system. Indications for use, side effects. Possibility of developing drug dependence.

96. Classification of analeptics. Physicochemical and pharmacokinetic features, localization and mechanisms of stimulating effects on the central nervous system.

The concept of "awakening action". Influence on respiration and blood circulation. Indications for use. Side effects.
97. Classifications of cardiotonic drugs, mechanism of action, pharmacological effects, indications for use and side effects.
98. Classification of antianginal drugs, mechanism of action, pharmacological effects, indications for use and side effects.
99. Classification of lipid-lowering drugs, mechanism of action, pharmacological effects, indications for use and side effects.
100. 128. Classification of antihypertensive drugs, mechanism of action, pharmacological effects, indications for use and side effects.
101. Classification of antiarrhythmic drugs, mechanism of action, pharmacological effects, indications for use and side effects.
102. Classification of drugs that affect the functions of the respiratory system.
103. Respiratory stimulants. Classification, pharmacokinetics, pharmacodynamics, indications for use, side effects.
104. Antitussives. Classification, pharmacokinetics, pharmacodynamics, indications for use, side effects.
105. Expectorants. Classification, pharmacokinetics, pharmacodynamics, indications for use, side effects.
106. Classification of medicines used for broncho-obstructive syndrome.
107. Medicines used for broncho-obstructive syndrome (β2-adrenergic agonists). Pharmacokinetics, pharmacodynamics, indications for use, side effects.
108. Medicines used in broncho-obstructive syndrome (M-anticholinergics and antispasmodic myotropic action). Pharmacokinetics, pharmacodynamics, indications for use, side effects.
109. Medicines used for broncho-obstructive syndrome (drugs that have anti-inflammatory and anti-allergic activity). Pharmacokinetics, pharmacodynamics, indications for use, side effects.
110. Principles of action of medicines used for pulmonary edema. The choice of the drug depending on the pathogenetic mechanisms of its development.
111. Medicines used for pulmonary edema (cardiotonic and diuretics). Pharmacokinetics, pharmacodynamics, indications for use, side effects.
112. Medicines used for pulmonary edema (vasodilators and antihypertensive drugs). Pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
113. Medicines used for pulmonary edema (narcotic analgesics, defoamers, oxygen therapy). Pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
114. Classification of diuretics.
115. Diuretics that have a direct effect on the function of the epithelium of the renal tubules. Pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

116. Diuretics (aldosterone antagonists and osmotically active diuretics). Pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
117. Means that reduce the content of uric acid in the body. Classification, pharmacokinetics,
pharmacodynamics, indications for use, contraindications, side effects.
118. Means that affect the tone and contractile activity of the myometrium. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
119. Classification of agents affecting the functions of the digestive system.
120. Means that affect appetite. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
121. Drugs used for dysfunction of the glands of the stomach (means of substitution therapy, drugs that stimulate the secretion of the glands of the stomach). Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
122. Drugs used for dysfunction of the stomach glands (drugs that lower the secretion of the stomach glands, antacids). Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
123. Drugs used for dysfunction of the glands of the stomach (gastroprotectors). Pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
124. Drugs affecting the motility of the stomach and intestines. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
125. Emetics and antiemetics. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
126. Choleretic drugs. Classification, pharmacokinetics, pharmacodynamics, indications for use,
contraindications, side effects.
127. Drugs used in violation of the excretory function of the pancreas. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
128. Laxatives. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
129. Classification of drugs affecting the blood system.
130. Drugs affecting erythropoiesis. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
131. Drugs affecting leukopoiesis. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
132. Drugs that increase blood clotting. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
133. Drugs that reduce blood clotting (direct anticoagulants). Pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

134. Drugs that reduce blood clotting (indirect anticoagulants). Pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
135. Drugs affecting fibrinolysis. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
136. Agents affecting platelet aggregation. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
137. Classification of hormonal drugs.
138. Sources of hormonal drugs. General principles of biological standardization. Principles of hormone therapy.
139. Pituitary hormone preparations. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
140. Thyroid hormone and antithyroid drugs. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
141. Physiological significance and practical application of calcitonin. Parathyroid hormone drug. Pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
142. Insulin preparations. Classification, pharmacokinetics, pharmacodynamics, indications for use,
contraindications, side effects.
143. Synthetic hypoglycemic agents. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
144. Ovarian hormone preparations (estrogenic and gestagenic drugs). Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
145. Preparations of male sex hormones. Pharmacokinetics, pharmacodynamics, indications for use,
contraindications, side effects.
146. Anabolic steroid. Pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
147. Preparations of hormones of the adrenal cortex (glucocorticoids). Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
148. .Adrenal cortex hormone preparations (mineralocorticoids). Pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
149. Classification of vitamin preparations.
150. Preparations of water-soluble vitamins (B vitamins). Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
151. Preparations of water-soluble vitamins (ascorbic acid and rutoside). Pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
152. Fat-soluble vitamin preparations. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

153. Acids and alkalis. Classification, pharmacokinetics, pharmacodynamics, indications for use,
contraindications, side effects.
154. Salts of alkali and alkaline earth metals. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
155. Enzyme preparations. Inhibitors of proteolytic enzymes. Classification, pharmacokinetics,
pharmacodynamics, indications for use, contraindications, side effects.
156. Classification of anti-inflammatory drugs.
157. Steroidal anti-inflammatory drugs. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
158. Non-steroidal anti-inflammatory drugs. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
159. Antiallergic drugs. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
160. Antihistamines. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
161. Immunotropic drugs. Classification, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
162. Chemotherapy drugs. The history of the use of chemotherapeutic agents in medicine.
163. Classification of chemotherapeutic agents. Basic principles of chemotherapy.
164. Antibiotics History of antibiotic use. Principles for the classification of antibiotics.
165. Antibiotics of the penicillin group. Biosynthetic penicillins. Classification, spectrum of action,
pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
166. Semi-synthetic penicillins. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects. Combined use of semi-synthetic penicillins with β-lactamase inhibitors (clavulanic acid).
167. Antibiotics of the cephalosporin group. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
168. Monobactams, carbapenems. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
169. Antibiotics of the macrolide and azalide group. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
170. Lincosamides. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

171. Antibiotics of the tetracyclines group. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
172. Chloramphenicol. Spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
173. Antibiotics are aminoglycosides. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
174. Polymyxins. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
175. Complications of antibiotic therapy, their prevention and correction.
176. Sulfanilamide preparations. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
177. Synthetic antimicrobial agents of different chemical structures (quinolone derivatives). Spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
178. Synthetic antimicrobial agents of different chemical structures (derivatives of 8-hydroxyquinoline initrofuran). Spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
179. Basic principles of tuberculosis chemotherapy. General characteristics of anti-tuberculosis drugs.
Classification. Standard DOTS Treatment Regimens.
180. Antituberculosis drugs of the 1st line. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
181. Anti-tuberculosis drugs of II and III lines. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
182. Anti-spirochete drugs. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
183. Classification of antiviral agents.
184. Antiviral agents. Spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
185. Antimalarial drugs. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
186. Anti-amebic agents. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
187. Means used for giardiosis and trichomonadosis. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects
188. Means used for toxoplasmosis and leishmaniasis. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.

189. Antifungal agents. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
190. Antihelminthic drugs. Classification, spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
191. The concept of antiseptics and disinfection. History of the use of antiseptic agents.
192. Classification of antiseptic and disinfectants.
193. Antiseptic and disinfectants. Spectrum of action, pharmacokinetics, pharmacodynamics, indications for use, contraindications, side effects.
194. Antiblastoma and adjuvant agents. Classification, mechanism of action, main pharmacological effects, indications for use and side effects.

1.4.4. Course policy and assessment criteria

The control of students' knowledge is carried out according to the point-rating system in accordance with the standard "Regulations on the modular point-rating system for assessing the knowledge of students at the NOU UNPK" International University of Kyrgyzstan ".

The discipline "Basic Pharmacology" includes 6 modules, toEach module is rated on a 100 point system:

Maximum score -100, of which:

- attendance - 20 points;

- current control - 40 points (20 points - for classroom work, 20 points - for independent work),

- midterm control (delivery of the module) - 40 points.

The results of the 6 modules are added up and the average score is displayed.

Scoring Policy	**Module 1**	**Module 2**	**Module 3**	**Module 4**	**Module 5**	**Module 6**
Attendance	20 points	20 points	20 points	20 points	20 points	20 points
Classroom work (activity in discussions, during oral questioning, working with a glossary, etc.)	20 points	20 points	20 points	20 points	20 points	20 points
Independent work: essay, report	20 points	20 points	20 points	20 points	20 points	20 points
Total by module (testing)	40 credits	40 credits	40 credits	40 credits	40 credits	40 credits
Total by discipline:	More than 60 points					
Test, exam						

Final control in the form of offset is carried out based on the results of attendance, current and midterm (modular) control.

Final control form - offset.

To assess the student's progress, the following scale of correspondence between grades and points is used:

Scale of correspondence of grades and points				
Maximum score	Intervals			
	"Unsatisfactory"	"satisfactorily"	"GOOD"	"EXCELLENT"
twenty	0-11	12-15	16-17	18-20
40	0-23	24-30	31-35	36-40
60	0-35	36-45	46-53	54-60
100	0-59	60-75	76-89	90-100

1.4.5. Educational-methodical and informational support of the discipline

List of sources and literature:

Main literature

- KD Tripathi "Essentials og medical pharmacology"
- Lippincott "Modern pharmacology with clinical applications"
- Basic & Clinical Pharmacology, 14e Bertram G. Katzung

Additional literature:

- Goodman & Gilman's: The Pharmacological Basis of Therapeutics, 13e
- Laurence L. Brunton, Randa Hilal-Dandan, Björn C. Knollmann
- Medical pharmacology and therapeutics Derek G. Waller and Anthony P. Sampson

The list of resources of the information and telecommunication network "Internet" necessary for mastering the discipline:

1. US Food & Drug Administration http://www.fda.gov/oc/oha/default.htm
2. http://kyrlibnet.kg/
3. www.iprbookshop.ru
4. http://www.biblioteka.kg/

1.4.6. Logistics of the discipline

When teaching students, she applies modern methods and forms of education using the latest information technologies, electronic educational resources and other information systems necessary for the successful implementation of educational, scientific and medical activities.

The classrooms of the course are equipped with modern and innovative facilities to provide quality education to students. The lecture halls are equipped with computers, video projectors and sound systems, allowing lectures to be delivered at a high professional level. There is also portable equipment for teaching staff in the form of laptops and projectors for convenient presentation of educational material in electronic format

1.4.7. Student research work

SIWS in the discipline "Basic Pharmacology" is aimed at solving the following problems:

- development of skills of perception and analysis of professional information;
- developing and improving the ability to make decisions and implement them;
- development and improvement of creative abilities in the independent study of professional problems.

To solve the first problem, students are invited to read and meaningful analysis of scientific monographs and articles on various public health issues contained inthe list of resources of the information and telecommunications network "Internet":

1. US Food & Drug Administration http://www.fda.gov/oc/oha/default.htm
2. http://kyrlibnet.kg/
3. www.iprbookshop.ru
4. http://www.biblioteka.kg/

The results of work with scientific monographs and articles are discussed in practical classes.

To develop and improve the communication skills of students, special training sessions are organized in the form of work in small groups, "brainstorming", discussions, presentations, or, in preparation for which, students are assigned in advance into groups defending a particular point of view on the problem under discussion.