

INTERNATIONAL HIGHER SCHOOL OF MEDICINE

Fundamental Disciplines Department

SYLLABUS

Basic Pharmacology

2025-2026 academic year

for students of medical faculty

2nd course 4th semester 10 groups

6 credit (180 h, including auditoria 108 h, self-working – 72 h)

Practical classes:

Satarkulova A.M. (1,2,3,4,5 groups)

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Tabaldieva Zh.B. (6,7,8,9,10 groups)

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Venue:

Educational and Morphological Center

Lev Tolstoy street 114/1, 5th floor

The Syllabus is considered

at the meeting of Fundamental Disciplines Department

Protocol № 1 dated 30.08.2025

Head of the department  A.M. Satarkulova

Course Objective: The study of the interaction of drugs with the human body: general patterns, features of pharmacokinetic and pharmacodynamic properties of groups and individual pharmacological drugs, side effects, indications and contraindications for use.

After study of the discipline the student must:

Knowledge:

- The use of drugs, disinfectants and their combinations in solving professional problems;
- Organization of qualified treatment for the patient;
- Dosage forms, routes of drug administration, types of their action and interaction;
- Main drug groups and pharmacotherapeutic actions of drugs by groups;
- Side effects of drugs and measures for their prevention and relief;
- Types of drug therapy complications;
- Types of drug interactions and types of drug incompatibility.

Skill:

- Apply drugs, disinfectants and their combinations in solving professional problems;
- Find information about medicines in available databases;
- Navigate the nomenclature of medicines;
- Prescribe medicines.

Attitude:

- Skill in the use of drugs, disinfectants and their combinations in solving professional problems;
- The ability to present information about pharmacological interventions in a way that is understandable to the patient;
- The skill of explaining to the patient the essence of pharmacological interventions;
- The ability to implement pharmacological intervention, interacting with participants in the treatment process.
- The skill of using medications in accordance with the rules for their use.
- The skill of using the regulatory framework, reference and scientific literature to solve professional problems.

Pre-requisites. Latin language, Biology, Anatomy, Normal physiology, Biochemistry.

Post-requisites. Internal Medicine, Pathology, Children's Diseases, Obstetrics and Gynecology, Dermatovenereology, Ophthalmology, Otorhinolaryngology, Neurology and Fundamentals of Neurosurgery, Phthisiopulmonology, Infectious Diseases, Psychiatry and Narcology, Anesthesiology.

THEMATIC PLAN OF LECTURES FOR 2nd YEAR 4th SEMESTER

№	Theme	Hours
1	Introduction to Cardiovascular System (Cardiac electrophysiological considerations).	2 h
2	Drugs Affecting renin angiotensin system (RAS).	2 h
3	Cardiac glycosides and drugs for heart failure.	2 h
4	Antiarrhythmic drugs.	2 h
5	Antianginal drugs.	2 h
6	Antihyperlipidemic drugs.	2 h
7	Diuretics and antidiuretics.	2 h
8	Antihypertensive drugs.	2 h
9	Plasma Expanders, Intravenous fluids and pharmacotherapy of shock.	2 h
10	Drugs affecting the haematopoietic system.	2 h
11	Anticoagulants.	2 h
12	Thrombolytics. Antifibrinolytics. Antiplatelet drugs.	2 h
13	Introduction in chemotherapy. General principles of chemotherapy.	2 h
14	Beta-lactam antibiotics.	2 h
15	Protein synthesis inhibitors: Macrolides.	2 h
16	Protein synthesis inhibitors: Aminoglycosides.	2 h
17	Protein synthesis inhibitors: Tetracyclines, Chloramphenicol.	2 h
18	Sulphonamides and Cotrimoxazole.	2 h
19	Quinolones and Urinary tract antiseptics.	2 h
20	Antiamoebic drugs.	2 h
21	Antimalarial drugs.	2 h
22	Antitubercular drugs.	2 h
23	Anthelmintic drugs.	2 h

24	Antifungal drugs.	2 h
25	Anti-viral drugs.	2 h
26	Anti-retroviral drugs.	
27	Anticancer drugs: alkylating drugs, nitrosoureas, antimetabolites.	2 h
28	Anticancer drugs: purine analogs, pyrimidine analogs, anticancer antibiotics, miscellaneous.	2 h
29	Nonsteroidal anti-inflammatory drugs (NSAIDs). Drugs for Rheumatoid arthritis and Gout.	2 h
30	Chelating and Immunocorrecting agents.	2 h
31	Introduction to Endocrine Pharmacology, anterior Pituitary hormones	2 h
32	Thyroid hormones and anti-thyroid drugs.	2 h
33	Corticosteroids.	2 h
34	Drugs acting on Reproductive system.	2 h
35	Insulin and oral hypoglycaemics.	2 h
36	Drugs affecting calcium balance.	2 h
	Total:	72 h

THEMATIC PLAN OF PRACTICAL CLASSES 2nd YEAR 4th SEMESTER

№	Theme	Time
1	Cardiac glycosides and drugs for heart failure.	2 h
2	Antiarrhythmic drugs.	2 h
3	Antianginal drugs. Antihyperlipidemic drugs. Unit №1.	2 h
4	Diuretics and antidiuretics. Antihypertensive drugs.	2 h
5	Drugs affecting the haematopoietic system.	2 h
6	Anticoagulants. Thrombolytics. Antifibrinolytics. Antiplatelet drugs. Unit №2.	2 h
7	General principles of chemotherapy. Beta-lactam antibiotics.	2 h
8	Protein synthesis inhibitors.	2 h
9	Sulphonamides and Cotrimoxazole. Unit №3.	2 h
10	Quinolones and Urinary tract antiseptics.	2 h
11	Antiprotozoal drugs. Antitubercular drugs.	2 h
12	Anthelmintic drugs. Antifungal drugs. Unit №4.	2 h
13	Anti-viral drugs.	2 h
14	Anticancer drugs.	2 h
15	Nonsteroidal anti-inflammatory drugs (NSAIDs). Drugs for Rheumatoid arthritis and Gout. Chelating and Immunocorrecting drugs. Unit №5.	2 h
16	Thyroid hormones and antithyroid drugs. Corticosteroids.	2 h
17	Drugs acting on Reproductive system.	2 h
18	Insulin and oral hypoglycaemics. Drugs affecting calcium balance. Unit №6.	2 h
	Total:	36 h

THEMATIC PLAN OF INDEPENDENT WORK OF STUDENTS

№	Theme of independent work	Hours
Unit I	Preparation of an abstract on the topic: «Uses of cardiac glycosides in patients with CHF» Writing recipes Solution of test Work with literature.	12
Unit II	Preparation of an abstract on the topic: «Toxic reactions of ACE-inhibitors in pregnant woman» Preparation of a presentation on the topic: «Pharmacological effects of loop diuretics depending on the route of drug administration and dose» Writing recipes Solution of test Work with literature.	12

Unit III	Preparation of an abstract on the topic: «Antibiotic resistance in the modern world. Ways to solve the problem» Writing recipes Solution of test Work with literature.	12
Unit IV	Preparation of an abstract on the topic: «Antifungal agents: clinical and pharmacological characteristics, uses» Writing recipes Solution of test Work with literature.	12
Unit V	Preparation of an abstract on the topic: «Anticancer drugs: clinical and pharmacological characteristics, Toxic reactions» Writing recipes Solution of test Work with literature.	12
Unit VI	Preparation of an abstract on the topic: «Uses of corticosteroids in acute allergic reactions» Writing recipes Solution of test Work with literature.	12
	Total:	72 h

Recommended reading for the discipline:

1.Basic

- 1) Karen Whalen Lippincott Illustrated Reviews: Pharmacology. ed.6 by , 2015, Wolters Kluwer Health
- 2) Harvey R.A., Clark M.A., Finkel R. Lippincott Illustrated Review of Pharmacology. – 5 ed., 2012, Wolters Kluwer Health
- 3) Trevor A.J., Katzung G., Masters S.B. Pharmacology. – 8 ed., 2009, MC Graw Hill Medical
- 4) Garg G.R. Pharmacology. – 2 ed., 2019, Jaypee Brothers Medical Publishers
- 5) Tripathy K.D. Essentials of Medical Pharmacology. – 6 ed., 2008, Jaypee Brothers
- 6) Tripathy K.D. Essentials of Medical Pharmacology. – 7 ed., 2015, Jaypee Brothers
- 7) Tripathy K.D. Essentials of Medical Pharmacology. – 8 ed., 2019, Jaypee Brothers
- 8) Nawaz Sh. Essentials of Pharmacology. – 9 ed., 2014, Jaypee Brothers Medical Publishers

2.Additional

- 1) Garg G.R. Pharmacology. Exam Review Series. 2015, Jaypee Brothers Medical Publishers
- 2) Garg G.R. Review of Pharmacology. 2014, Jaypee Brothers Medical Publishers
- 3) Katzung B.G. Basic and Clinical Pharmacology - 8th ed., 2001, MC Graw Hill Medical
- 4) Katzung B.G. Basic and Clinical Pharmacology - 8th ed., 2004, MC Graw Hill Medical
- 5) Katzung B.G. Basic and Clinical Pharmacology - 10th ed., 2007, MC Graw Hill Medical
- 6) Katzung B.G. Basic and Clinical Pharmacology - 13th ed., 2015, MC Graw Hill Medical
- 7) Mycek M.J., Harvey R.A., Champe P.C. Pharmacology – 2 nd ed., 2000, Richland, Washington, United States
- 8) Satoskar R.S. Pharmacology and Pharmacotherapeutics. -25th ed., 2017, Elsevier Health
- 9) Baird S.M. USMLE Step1 Pharmacology, 2000, Kaplan Publishing

Resources of the information and telecommunication network «Internet»

1. <https://pharmaceuticals.gov.in/sites/default/files/NLEM.pdf>
2. https://pharmacomedica.org/images/cnpm/CNPM_2016/katzung-pharmacology.pdf
3. <https://ismexams.com>

Grading policy and procedures for all types of work

For the period of studying the discipline, the student gains points for the relevant parameters (per unit):

current score - 40 points

independent work - 20 points

control score (final assessment of knowledge per unit) - 40 points

Maximum score - 100 (40+20+40)

Grading system for student's achievements

Grading criteria per discipline				
Maximum score	Intervals			
	«unsatisfactory»	«satisfactory»	«good»	«excellent»
Current control- 40	0-23	24-30	31-35	36-40
Interval description	Does not know the definition and classification of side effects of drugs. He does not know the indications for use and contraindications for the use of drugs. Does not answer additional questions asked by the teacher.	Knows the definition and classification of medicines. Knowledge of pharmacokinetics and pharmacodynamics of drugs. Does not know the mechanisms of action of drugs. Knows the therapeutic and toxic doses and side effects of drugs. Knows the indications for use and contraindications for the use of drugs. Hesitantly answers additional questions asked by the teacher.	Knows the definition and classification of medicines. Knowledge of pharmacokinetics and pharmacodynamics of drugs. Knows the therapeutic and toxic doses and side effects of drugs. Does not know the mechanisms of action of drugs. Knows the indications for use and contraindications for the use of drugs. Hesitantly answers additional questions asked by the teacher.	Knows the definition and classification of medicines. Knowledge of pharmacokinetics and pharmacodynamics of drugs. Knows the mechanisms of action of drugs and can explain them. Confidently knows the therapeutic and toxic doses and side effects of drugs. Confidently knows the indications for use and contraindications for the use of medicines. Confidently answers additional questions asked by the teacher.
Independent work - 20	0-11	12-15	16-17	18-20
Interval description	Doesn't do homework. Did not prepare an abstract, report Can't write prescription. Can't complete the table. Not able to solve situational problems. Does not know how to solve crossword puzzles, test tasks. Does not know how to work with visual materials.	Does not complete homework. Prepared a defective abstract, report. Wrote a recipe with two or more mistakes. Didn't complete the table. Not confident in problem solving. Has doubts when solving crossword puzzles, test tasks. Not confident with visual materials	Completely completes homework. Prepared an abstract, a report. Wrote a recipe with no more than two mistakes. Completed the table. Solves situational problems, test tasks. Solve crossword puzzles with hesitation. Weakly works with visual materials	Completely completes homework, confidently answers questions. Prepared an abstract, report, confidently answers the questions asked by the teacher. Confident in writing recipes. Confidently solves situational problems, tests Confidently fills in the table, knows how to work with visual materials, crossword puzzles
Control work (module) – 40	0-23	24-30	31-35	36-40
Interval description	Less than 60% of correct answers from the total number of questions during control testing	The presence of 60% to 75% correct answers from the total number of questions during testing	The presence of 76% to 89% correct answers of the total number of questions during control testing	The presence of 90% or more correct answers from the total number of questions during control testing

Conduct Policy: (lateness, absence, behavior in the auditorium, late submission of work).

- Punctuality and completion of tasks.
- Mandatory attendance of classes.
- Attending class in a clean medical uniform.
- Eliminating conversations on a cell phone in the classroom.

- Active participation in the learning process.
- Doing homework on time.
- Academic detention at the time specified by the teacher.

For violations of the Conduct Policy, the total points for discipline might be reduced to 1-10 points.

Academic Ethics Policy.

- Be tolerant, respect the opinions of others.
- Formulate objections in the correct form.
- Constructively support feedback in all classes.
- Plagiarism and other forms of dishonest work are unacceptable. Plagiarism includes the following: the absence of references when using printed and electronic materials, quotes, thoughts and works of other authors or students.
- Prompting and cheating during tests, exams, classes is unacceptable as well as passing an exam for another student, unauthorized copying of materials.

For violations of the Academic Ethics Policy, the total points for the discipline may be reduced to 1-10

Guidelines for the lessons of the discipline

Unit I. Drugs affecting the cardiovascular system: cardiac glycosides, antiarrhythmic and antianginal drugs.

Key questions covered in lesson 1: Cardiac glycosides: classification of drugs, mode of action, side effects, therapeutic uses.

Recommended reading for the lesson:

- [1] Karen Whalen Lippincott Illustrated Reviews: Pharmacology. ed.6 by , 2015
- [2] Tripathy K.D. Essentials of Medical Pharmacology. – 8 ed., 2019
- [3] Katzung B.G. Basic and Clinical Pharmacology - 13th ed., 2015

Key questions covered in lesson 2: Antiarrhythmic drugs: classification of drugs, mode of action, side effects, therapeutic uses.

Recommended reading for the lesson:

- [1] Karen Whalen Lippincott Illustrated Reviews: Pharmacology. ed.6 by , 2015
- [2] Tripathy K.D. Essentials of Medical Pharmacology. – 8 ed., 2019
- [3] Katzung B.G. Basic and Clinical Pharmacology - 13th ed., 2015

Key questions covered in lesson 3: Antianginal drugs. Antihyperlipidemic drugs: classification of drugs, mode of action, side effects, therapeutic uses.

Recommended reading for the lesson:

- [1] Karen Whalen Lippincott Illustrated Reviews: Pharmacology. ed.6 by , 2015
- [2] Tripathy K.D. Essentials of Medical Pharmacology. – 8 ed., 2019
- [3] Katzung B.G. Basic and Clinical Pharmacology - 13th ed., 2015

Final control work: 40 multiple choice questions (MCQ).

Guidelines for the lessons of the discipline

Unit II. Drugs affecting the cardiovascular system: antihypertensive drugs and drugs affecting the hematopoietic system.

Key questions covered in lesson 1: Diuretics and antidiuretics. Antihypertensive drugs: classification of drugs, mode of action, side effects, therapeutic uses.

Recommended reading for the lesson:

- [1] Karen Whalen Lippincott Illustrated Reviews: Pharmacology. ed.6 by , 2015
- [2] Tripathy K.D. Essentials of Medical Pharmacology. – 8 ed., 2019
- [3] Katzung B.G. Basic and Clinical Pharmacology - 13th ed., 2015

Key questions covered in lesson 2: Drugs affecting the haematopoietic system: classification of drugs, mode of action, side effects, therapeutic uses.

Recommended reading for the lesson:

- [1] Karen Whalen Lippincott Illustrated Reviews: Pharmacology. ed.6 by , 2015
- [2] Tripathy K.D. Essentials of Medical Pharmacology. – 8 ed., 2019
- [3] Katzung B.G. Basic and Clinical Pharmacology - 13th ed., 2015

Key questions covered in lesson 3: Anticoagulants. Thrombolytics. Antifibrinolytics. Antiplatelet drugs: classification of drugs, mode of action, side effects, therapeutic uses.

Recommended reading for the lesson:

- [1] Karen Whalen Lippincott Illustrated Reviews: Pharmacology. ed.6 by , 2015
- [2] Tripathy K.D. Essentials of Medical Pharmacology. – 8 ed., 2019
- [3] Katzung B.G. Basic and Clinical Pharmacology - 13th ed., 2015

Final control work: 40 multiple choice questions (MCQ).

Guidelines for the lessons of the discipline

Unit III. Chemotherapeutic drugs: antibiotics and antibacterial agents with various chemical structures.

Key questions covered in lesson 1: Beta-lactam antibiotics: classification of drugs, mode of action, side effects, therapeutic uses.

Recommended reading for the lesson:

- [1] Karen Whalen Lippincott Illustrated Reviews: Pharmacology. ed.6 by , 2015
- [2] Tripathy K.D. Essentials of Medical Pharmacology. – 8 ed., 2019
- [3] Katzung B.G. Basic and Clinical Pharmacology - 13th ed., 2015

Key questions covered in lesson 2: Protein synthesis inhibitors: classification of drugs, mode of action, side effects, therapeutic uses.

Recommended reading for the lesson:

- [1] Karen Whalen Lippincott Illustrated Reviews: Pharmacology. ed.6 by , 2015
- [2] Tripathy K.D. Essentials of Medical Pharmacology. – 8 ed., 2019
- [3] Katzung B.G. Basic and Clinical Pharmacology - 13th ed., 2015

Key questions covered in lesson 3: Sulphonamides and Cotrimoxazole: classification of drugs, mode of action, side effects, therapeutic uses.

Recommended reading for the lesson:

- [1] Karen Whalen Lippincott Illustrated Reviews: Pharmacology. ed.6 by , 2015
- [2] Tripathy K.D. Essentials of Medical Pharmacology. – 8 ed., 2019
- [3] Katzung B.G. Basic and Clinical Pharmacology - 13th ed., 2015

Final control work: 40 multiple choice questions (MCQ).

Guidelines for the lessons of the discipline**Unit IV. Chemotherapeutic drugs: antiprotozoal, antitubercular, anthelmintic and antifungal agents.**

Key questions covered in lesson 1: Quinolones and Urinary tract antiseptics: classification of drugs, mode of action, side effects, therapeutic uses.

Recommended reading for the lesson:

- [1] Karen Whalen Lippincott Illustrated Reviews: Pharmacology. ed.6 by , 2015
- [2] Tripathy K.D. Essentials of Medical Pharmacology. – 8 ed., 2019
- [3] Katzung B.G. Basic and Clinical Pharmacology - 13th ed., 2015

Key questions covered in lesson 2: Antiprotozoal drugs. Antitubercular drugs: classification of drugs, mode of action, side effects, therapeutic uses.

Recommended reading for the lesson:

- [1] Karen Whalen Lippincott Illustrated Reviews: Pharmacology. ed.6 by , 2015
- [2] Tripathy K.D. Essentials of Medical Pharmacology. – 8 ed., 2019
- [3] Katzung B.G. Basic and Clinical Pharmacology - 13th ed., 2015

Key questions covered in lesson 3: Anthelmintic drugs. Antifungal drugs: classification of drugs, mode of action, side effects, therapeutic uses.

Recommended reading for the lesson:

- [1] Karen Whalen Lippincott Illustrated Reviews: Pharmacology. ed.6 by , 2015
- [2] Tripathy K.D. Essentials of Medical Pharmacology. – 8 ed., 2019
- [3] Katzung B.G. Basic and Clinical Pharmacology - 13th ed., 2015

Final control work: 40 multiple choice questions (MCQ).

Guidelines for the lessons of the discipline**Unit V. Chemotherapeutic drugs: antiviral, anticancer drugs. Immunocorrecting agents.**

Key questions covered in lesson 1: Antiviral drugs: classification of drugs, mode of action, side effects, therapeutic uses.

Recommended reading for the lesson:

- [1] Karen Whalen Lippincott Illustrated Reviews: Pharmacology. ed.6 by , 2015
- [2] Tripathy K.D. Essentials of Medical Pharmacology. – 8 ed., 2019
- [3] Katzung B.G. Basic and Clinical Pharmacology - 13th ed., 2015

Key questions covered in lesson 2: Anticancer drugs: classification of drugs, mode of action, side effects, therapeutic uses.

Recommended reading for the lesson:

- [1] Karen Whalen Lippincott Illustrated Reviews: Pharmacology. ed.6 by , 2015
- [2] Tripathy K.D. Essentials of Medical Pharmacology. – 8 ed., 2019
- [3] Katzung B.G. Basic and Clinical Pharmacology - 13th ed., 2015

Key questions covered in lesson 3: Nonsteroidal anti-inflammatory drugs (NSAIDs). Drugs for Rheumatoid arthritis and Gout. Chelating and Immunocorrecting drugs: classification of drugs, mode of action, side effects, therapeutic uses.

Recommended reading for the lesson:

- [1] Karen Whalen Lippincott Illustrated Reviews: Pharmacology. ed.6 by , 2015
- [2] Tripathy K.D. Essentials of Medical Pharmacology. – 8 ed., 2019
- [3] Katzung B.G. Basic and Clinical Pharmacology - 13th ed., 2015

Final control work: 40 multiple choice questions (MCQ).

Guidelines for the lessons of the discipline**Unit VI. Hormones.**

Key questions covered in lesson 1: Thyroid hormones and antithyroid drugs. Corticosteroids: classification of drugs, mode of action, side effects, therapeutic uses.

Recommended reading for the lesson:

- [1] Karen Whalen Lippincott Illustrated Reviews: Pharmacology. ed.6 by , 2015
- [2] Tripathy K.D. Essentials of Medical Pharmacology. – 8 ed., 2019
- [3] Katzung B.G. Basic and Clinical Pharmacology - 13th ed., 2015

Key questions covered in lesson 2: Drugs acting on Reproductive system: classification of drugs, mode of action, side effects, therapeutic uses.

Recommended reading for the lesson:

- [1] Karen Whalen Lippincott Illustrated Reviews: Pharmacology. ed.6 by , 2015
- [2] Tripathy K.D. Essentials of Medical Pharmacology. – 8 ed., 2019
- [3] Katzung B.G. Basic and Clinical Pharmacology - 13th ed., 2015

Key questions covered in lesson 3: Insulin and oral hypoglycaemics. Drugs affecting calcium balance: classification of drugs, mode of action, side effects, therapeutic uses.

Recommended reading for the lesson:

- [1] Karen Whalen Lippincott Illustrated Reviews: Pharmacology. ed.6 by , 2015
- [2] Tripathy K.D. Essentials of Medical Pharmacology. – 8 ed., 2019
- [3] Katzung B.G. Basic and Clinical Pharmacology - 13th ed., 2015

Final control work: 40 multiple choice questions (MCQ).

Methodological instructions for the implementation of independent work on the discipline.**Unit I. Drugs affecting the cardiovascular system: cardiac glycosides, antiarrhythmic and antianginal drugs.**

Students are given an individual learning project which must be completed. Every group is given one common learning project which must be completed. The results should be reported in the form of presentation on the topic: «Uses of cardiac glycosides in patients with CHF». Students have to know action of cardiac glycosides, antiarrhythmic drugs, antianginal drugs and antihyperlipidemic drugs on their pharmacokinetics and pharmacodynamics properties. To write out in recipes medical products in various medicinal forms. To estimate an opportunity of toxic action of medicine and ways of treatment of poisonings with medical products.

Unit II. Drugs affecting the cardiovascular system: antihypertensive drugs and drugs affecting the hematopoietic system. Every student is given an individual learning project which must be completed. The results should be reported in the form of presentation on the topic: «Toxic reactions of ACE-inhibitors in pregnant woman» and «Pharmacological effects of loop diuretics depending on the route of drug administration and dose». Students should analyze action of diuretics, antihypertensive drugs, anticoagulants, thrombolytics, antifibrinolytics and antiplatelet drugs on their pharmacokinetics and pharmacodynamics properties. To write out in recipes medical products in various medicinal forms. To estimate an opportunity of toxic action of medicine and ways of treatment of poisonings with medical products.

Unit III. Chemotherapeutic drugs: antibiotics and antibacterial agents with various chemical structures. Every group is given one common learning project which must be completed. The results should be reported in the form of presentation. on the topic: «Antibiotic resistance in the modern world. Ways to solve the problem». Students have to know action of antibiotics and antibacterial agents with various chemical structures on their pharmacokinetics and pharmacodynamics properties. To write out in recipes medical products in various medicinal forms. To estimate an opportunity of toxic action of medicine and ways of treatment of poisonings with medical products.

Unit IV. Chemotherapeutic drugs: antiprotozoal, antitubercular, anthelmintic and antifungal agents. Every student is given an individual learning project which must be completed. The results should be reported in the form of presentation on the topic: «Antifungal agents: clinical and pharmacological characteristics, uses». Students should analyze action of quinolones, antiprotozoal drugs, antitubercular drugs, anthelmintic drugs, antifungal drugs on their pharmacokinetics and pharmacodynamics properties. To write out in recipes medical products in various medicinal forms. To estimate an opportunity of toxic action of medicine and ways of treatment of poisonings with medical products.

Unit V. Chemotherapeutic drugs: antiviral, anticancer drugs. Immunocorrecting agents. Students are given an individual learning project which must be completed. The results should be reported in the form of presentation on the topic: «Anticancer drugs: clinical and pharmacological characteristics, Toxic reactions». Every student has to know action of anti-viral drugs, anticancer drugs, nonsteroidal anti-inflammatory drugs (NSAIDs) and immunocorrecting agents on their pharmacokinetics and pharmacodynamics properties. To write out in recipes medical products in various medicinal forms.

Unit VI. Hormones. Every student is given an individual learning project which must be completed. The results should be reported in the form of presentation on the topic «Uses of corticosteroids in acute allergic reactions». Students should analyze action of hormones on their pharmacokinetics and pharmacodynamics properties. To write out in recipes medical products in various medicinal forms. To estimate an opportunity of toxic action of medicine and ways of treatment of poisonings with medical products.