

**Thematic plan of seminars
in the discipline "PHARMACOLOGY"
for students of 2023 year of admission
for students of the educational program
specialist's degree
in the specialty 33.05.01 Pharmacy
Profile Pharmacy
form of study full-time
for the 2025-2026 academic year**

№	Thematic blocks	Practical training (PT) within the framework of the Theoretical Unit	Hours (academic)
4th semester			
1.	Introduction to formulation ¹ . Solid and soft dosage forms ² .	PT	4
2.	Liquid dosage forms.	PT	4
3.	Introduction to pharmacology ¹ . Scientific approaches and fundamentals of creating medicines.	PT	4
4.	General pharmacology ¹ . Pharmacokinetics of medicinal products ² . Pharmacodynamics of medicinal products ² .	PT	4
5.	Final session on general pharmacology and general formulation. General pharmacology.	PT	4
6.	Drugs that regulate peripheral nervous system ¹ Local anesthetics ² . Astringents. Enveloping, adsorbing agents. Irritants ² .	PT	4
7.	Pharmacology of cholinergic transmission ¹ . Cholinomimetics, anticholinergic agents ² .	PT	4
8.	Agents affecting adrenergic synapses ¹ . Adrenomimetics, blockers ² .	PT	4
9.	Final lesson in the section: "Agents affecting the peripheral nervous system"¹.	PT	4
10.	Drugs regulating the functions of the central nervous system. Inhaled and non-inhaled anesthesia. Ethyl alcohol.	PT	4
11.	Major neurotransmitters of the central nervous system ¹ . Ethyl alcohol ¹ . Hypnotics ¹ .	PT	4
12.	Antiepileptics ¹ . Antiparkinsonics ¹ .	PT	4
13.	Analgesics ¹ . Narcotic (opioid) analgesics ² . Non-narcotic analgesics ² .	PT	4
14.	Neuroleptics ¹ . Antidepressants. Tranquilizers. Sedatives ¹ .	PT	4
15.	Psychostimulants ¹ . Nootropic medications ¹ .	PT	4

16.	Final lesson in the section: "Agents affecting the central nervous system" ¹.	PT	4
17.	Medicinal products regulating the functions of executive organs. Cardiotonic agents ¹ . Antiarrhythmics ¹ .	PT	4
18.	Final lesson	PT	4
5th semester			
19.	Agents used for coronary insufficiency ¹ Antianginal medications ² . Cardioprotectants ² . Remedies for myocardial infarction ² .	PT	4
20.	Agents used in cerebral hemorrhage ¹ . Agents for the treatment and prevention of migraine attacks ¹ .	PT	4
21.	Antihypertensive medications ¹ .	PT	4
22.	Vascular medications ¹ . Hypertensive medications ² . Venotropic agents ² .	PT	4
23.	Final lesson in the section: "Agents affecting the cardiovascular system" ¹.	PT	4
24.	Respiratory effects ¹ . Antitussive ² . Expectorants ² . Agents for the treatment of bronchial asthma ² .	PT	4
25.	Medicines used for gastric gland disorders ¹ .	PT	4
26.	Emetics and antiemetics ¹ . Agents affecting liver function. Choleric agents ² . Agents used in case of pancreatic excretory dysfunction ¹ . Agents affecting intestinal motility ² .	PT	4
27.	Agents affecting hematopoiesis ¹ . Agents increasing blood clotting ¹ .	PT	4
28.	Agents that reduce thrombus formation. Agents that inhibit platelet aggregation (antiplatelet agents) ² . Agents that reduce blood clotting (anticoagulants). Fibrinolytic (thrombolytic) agents.	PT	4
29.	Final lesson on the section: "Means influencing the functions of executive bodies" ¹.	PT	4
30.	Preparations of hypothalamus and pituitary hormones ¹ . Preparations of thyroid hormones and antithyroid agents. Antithyroid agents. Pancreatic hormones ¹ .	PT	4
31.	Hormonal drugs of the adrenal cortex ¹ . Glucocorticoids. Steroid anti-inflammatory drugs ² .	PT	4
32.	Nonsteroidal anti-inflammatory drugs ¹ .	PT	4
33.	Agents that affect immune processes ¹ . Immunostimulants and immunosuppressants ² .	PT	4
33.	Water-soluble vitamins ¹ . Fat-soluble vitamins ¹ .	PT	4
34.	Antiatherosclerotic and hypolipidemic agents ¹ . Agents used in obesity ² .	PT	4
35.	Diuretics ¹ . Plasma substitutes and detoxifying agents ¹ .	PT	4
36.	Final lesson.	PT	4
6th semester			
37.	Medicines used for the treatment and prevention of osteoporosis ¹ . Anti-gout medicines ¹ .	PT	4

38.	Final lesson on the topic: "Means that affect metabolic processes¹".	PT	4
39.	Principles of chemotherapy of infectious diseases ¹ . Antiseptic agents ² . Disinfectants ² .	PT	4
40.	General principles of antibiotic therapy ¹ . Antibiotics.	PT	4
41.	Antibiotics ¹ . Pharmacological characteristics of individual groups of drugs ² .	PT	4
42.	Synthetic chemotherapeutic agents ¹ .	PT	4
43.	Anti-tuberculosis agents ¹ . Anti-fungal agents ¹ .	PT	4
44.	Antiviral agents ¹ .	PT	4
45.	Antiprotozoal ¹ . Anthelmintic agents ¹ .	PT	4
46.	Final session: «Chemotherapeutic agents»¹.	PT	4
47.	Agents for the treatment of malignancy ¹ .	PT	4
48.	Basic principles for the treatment of poisoning ¹ .	PT	4
49.	Drug delivery systems	PT	4
50.	The concept of homeopathic agents ¹ , history, classification, indications for use. Diagnostic agents ² .	PT	4
51.	Modern radiopharmaceuticals. Part I.	PT	4
52.	Modern radiopharmaceuticals. Part II.	PT	4
53.	Final lesson.	PT	4
	Total		212

1 – topic

2 – essential content

3 – practical training within the framework of the Theoretical block.

Reviewed at the meeting of the Department of Pharmacology and Bioinformatics

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Head of Department,
Academician of the Russian
Academy of Sciences,
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