

**Thematic plan for lecture-type classes  
in discipline « General pharmaceutical chemistry »  
for students of 2023 year of admission  
under the educational programme  
33.05.01 Pharmacy,  
specialisation (profile) Pharmacy  
(Specialist's degree),  
form of study full-time  
for the 2025-2026 academic year**

№	Topics of lecture-type classes	Hours (academic)
<b>4 term</b>		
1.	Subject and tasks of pharmaceutical chemistry <sup>1</sup> . Basics of legislation. Terminology in pharmaceutical chemistry, nomenclature. Classification of medicines <sup>2</sup> .	2
2.	Sources and methods of obtaining medicines <sup>1</sup> . Medicinal products of plant, mineral, animal, microbial, synthetic origin <sup>2</sup> .	2
3.	Prerequisites for the creation of new medicines <sup>1</sup> . Search and methods of drug design <sup>2</sup> .	2
4.	State principles of rationing of medicines <sup>1</sup> . Professional duties of a pharmacist-analyst of a pharmacy <sup>2</sup> .	2
5.	Authenticity of medicinal products of inorganic nature <sup>1</sup> . Identification of cations and anions of medicinal products of inorganic nature <sup>2</sup> .	2
6.	Authenticity of medicinal products of organic nature <sup>1</sup> . Identification of functional groups of organic compounds <sup>2</sup> .	2
7.	Purity tests of medicinal substances <sup>1</sup> . Impurities <sup>2</sup> .	2
8.	Purity tests of medicinal substances according to chemical properties <sup>1</sup> . Impurities of inorganic ions. Impurities of heavy metals and arsenic in medicines <sup>2</sup> .	2
9.	Quantitative assessment of medicines <sup>1</sup> . Chemical methods of pharmacopoeia analysis. Neutralization <sup>2</sup> .	2
<b>5 term</b>		
1.	Quality assurance system of medicines <sup>1</sup> . Standardization and validation of medicines <sup>2</sup> .	2
2.	Metrology <sup>1</sup> . Basic concepts. Metrological characteristics of the analysis results <sup>2</sup> .	2
3.	Quality control of medicines in pharmacies <sup>1</sup> . Types of intra-pharmacy drug control <sup>2</sup> .	2

<b>6 term</b>		
1.	Viruses <sup>1</sup> . General characteristics of viruses. Classification. Features of chemotherapy for viral infections. Targets for antiviral agents <sup>2</sup> .	2
2.	HIV. General pharmaceutical analysis of drugs for the treatment of HIV infection <sup>1</sup> . Reverse transcriptase inhibitors. Protease and integrase inhibitors <sup>2</sup> .	2
3.	Coronavirus <sup>1</sup> . Structure. Pathology. General pharmaceutical analysis of anticoronavirus drugs <sup>2</sup> .	2
	Total	30

<sup>1</sup> - Subject

<sup>2</sup> - Essential content

Considered at the department meeting Pharmaceutical, Toxicological Chemistry, Pharmacognosy and Botany, protocol of «30» \_\_may\_\_ 2025 г. № \_10\_.

Head of the Department



A. Ozerov