The thematic lesson plan of the lecture type
in the discipline "General pharmaceutical Chemistry"
for students enrolled in 2023
according to the educational program
33.05.01 Pharmacy,
Pharmacy Profile
(specialty),
the form of study is full-time
for the 2024 – 2025 academic year

№	Topics of lecture-type lesson	Hours (academic)
4 term		
1.	Subject and tasks of pharmaceutical chemistry[1]. Basics of legislation. Terminology in pharmaceutical chemistry, nomenclature. Classification of medicines[2].	2
2.	Sources and methods of obtaining medicines[1]. Medicinal products of plant, mineral, animal, microbial, synthetic origin[2].	2
3.	Prerequisites for the creation of new medicines[1]. Search and methods of drug design[2].	2
4.	State principles of rationing of medicines[1]. Professional duties of a pharmacist-analyst of a pharmacy[2].	2
5.	Authenticity of medicinal products of inorganic nature[1]. Identification of cations and anions of medicinal products of inorganic nature[2].	2
6.	Authenticity of medicinal products of organic nature[1]. Identification of functional groups of organic compounds[2].	2
7.	Purity tests of medicinal substances[1]. Impurities[2]..	2
8.	Purity tests of medicinal substances according to chemical properties[1]. Impurities of inorganic ions. Impurities of heavy metals and arsenic in medicines[2].	2
9.	Quantitative assessment of medicines[1]. Chemical methods of pharmacopoeia analysis. Neutralization[2].	2
5 term		
10.	Quantitative assessment of medicines[1]. Sedimentary titration. Argentometry[2].	2
11.	Quantitative assessment of medicines[1]. Chemical methods of pharmacopoeia analysis. Complexonometry. Determination of nitrogen in organic compounds. Kjeldahl's method[2].	2
12.	Quantitative assessment of medicines[1]. Chemical methods of pharmacopoeia analysis. Oxidimetry. Permanganatometry. Cerimetry[2].	2
13.	Quantitative assessment of medicines[1]. Chemical methods of pharmacopoeia analysis. Oxidimetry. Iodometry. Bichromatometry. Iodochlorometry[2].	2
14.	Quantitative assessment of medicines[1]. Chemical methods of pharmacopoeia analysis. Oxidimetry. Nitritometry. Bromatometriy[2].	2
15.	Quality assurance system of medicines[1]. Standardization and validation of medicines[2].	2
16.	Metrology[1]. Basic concepts. Metrological characteristics of the	2

	analysis results[2].	
17.	Quality control of medicines in pharmacies[1]. Types of intra-pharmacy drug control[2].	2
18.	Incompatible combinations of medicines[1]. Types of incompatibilities of medicines. Ways to overcome different types of incompatibility of medicines[2].	2
6 term		
19.	Viruses[1]. General characteristics of viruses. Classification. Features of chemotherapy for viral infections. Targets for antiviral agents[2].	2
20.	HIV. General pharmaceutical analysis of drugs for the treatment of HIV infection[1]. Reverse transcriptase inhibitors[2].	2
21.	HIV. General pharmaceutical analysis of drugs for the treatment of HIV infection[1]. Protease and integrase inhibitors[2].	2
22.	Influenza virus[1]. Structural features. Pathology. General pharmaceutical analysis of anti-influenza drugs[2].	2
23.	Coronavirus[1]. Structure. Pathology. General pharmaceutical analysis of anticoronavirus drugs[2].	2
24.	Hepatitis B virus[1]. Structure. Pathology. General pharmaceutical analysis of drugs for the treatment of hepatitis B[2].	2
25.	Hepatitis C virus[1]. Structure. Pathology. General pharmaceutical analysis of drugs for the treatment of hepatitis C[2].	2
26.	Viruses of the herpesviridae family[1]. Structure. Pathology. General pharmaceutical analysis of antiherpetic drugs[2].	2
27.	Cytomegalovirus[1]. General pharmaceutical analysis of anti-cytomegalovirus drugs[2].	2
	Total	54

[1] - Subject
[2] - Essential content

Reviewed at the meeting of the department of Pharmaceutical and Toxicological Chemistry, Pharmacognosy and Botany on «28» august, 2024, protocol № 1.

Head of the Department A. Ozerov