

AMENDMENTS AND CHANGES TO THE CURRICULUM IN THE EDUCATIONAL DISCIPLINE
«PHARMACEUTICAL CHEMISTRY»
for the specialty 1-79 01 08 “Pharmacy”

2021/2022 academic year

Amendments and changes	Basis/Reason
1. Changes have been introduced into the educational discipline curricular chart	Educational Plan for 2021/2022 academic year
2. The following sections have been added to the information and methodological part: Main forms of supervised student independent work: – presentation of reports; – studying topics and problems that have not been discussed at the lectures; – computer testing; – preparation of didactic materials. Control of supervised student independent work is carried out in the forms of: – computer testing; – individual interview.	Educational Plan for 2021/2022 academic year
3. The literature has been updated	

pharmaceutical chemistry (protocol # 14 of 24.06.2021)

Acting head of the department
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EDUCATIONAL DISCIPLINE CURRICULAR CHART

Section, topic #	Section (topic) name	number of hours			Self-studies	Equipment	Form of control
		lectures	practical (laboratory or seminars)	supervised self-study			
5 semester							
1.1	Introduction to the discipline "Pharmaceutical Chemistry". The main sections of the discipline "Pharmaceutical Chemistry", the field of research and communication with other sciences. Terminology. Rules for choosing the names of medicines. Principles of classification of medicines.	2	3	0,5	3,5	[1,2,3,4,5,7]	Test, situational tasks
1.2	Sources and methods of obtaining medicines	2	3	0,5	3,5	[1,2,6,7,8,]	Test, protocol of practical work
1.3	Ensuring the quality of medicines	2	3	0,5	10,5	[1,2,3,4,5,7,8,9]	Test, situational tasks
1.4	Stability and shelf life of medicines	2	3	0,5	3,5	[1,2,3,4,5,6,7,8,9]	Test, final test
2.1	General characteristics of pharmaceutical analysis	2	3	0,5	3,5	[1,2,3,4,5,6,7,8,9]	Test, protocol of practical work
2.2.1	Chemical methods of analysis	2	3	0,5	7	[1,2,3,4,5,6,8,9]	Test, protocol of practical work
2.2.2	Spectroscopic methods of analysis	2	3	0,5	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work
2.2.3	Electrochemical methods of analysis	2	3	0,5	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work
2.2.4	Chromatographic analysis methods	2	3	0,5	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work
2.2.5	Other methods of analysis. Validation of analysis techniques	2	3	0,5	3,5	[1,2,3,4,5,6,8,9]	Test, final test

2.3.1	General characteristics of pharmacopeial analysis. Reagents used in pharmacopeial analysis	2	3	0,5	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work
2.3.2	Physico-chemical properties of medicinal substances	2	3	0,5	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work
2.3.3	Identification of medicines	4	3	2	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work
2.3.4	Physical constants of medicines	2	3	0,5	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work, situational tasks
2.3.5.	Impurities in medicines	2	3	0,5	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work
2.3.6	Methods of quantitative analysis of medicines	2	3	0,5	7	[1,2,3,4,5,6,8,9]	Test, protocol of practical work, situational tasks
2.3.7	Pharmacopoeial analysis of finished medicines	2	3	0,5	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work, situational tasks
2.4.1	Pharmacopoeial water quality control	2	3	0,5	3,5	[1,2,3,4,5,6,8,9]	Test, final test
2.4.2	Derivatives of s-elements	2	3	0,5	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work, credit
6 semester							
2.4.3	Derivatives of p-elements	2	3	0,5	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work
2.4.4	Derivatives of d-elements	2	3	0,5	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work
2.5.1	Derivatives of alkanes, alcohols, ethers, aldehydes	2	3	0,5	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work
2.5.2	Derivatives of carbohydrates, carboxylic acids, amino acids, terpenoids	2	3	0,5	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work
2.6.1	Derivatives of phenols and aromatic acids	2	3	0,5	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work
2.6.2	Derivatives of aromatic amino acids, phenylalkylamines, sulfanilic acid	2	3	0,5	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work
2.7.1	Derivatives of furan, benzopyran, pyrazole, benzimidazole, pyridine	2	3	0,5	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work

2.7.2	Derivatives of isoquinoline, purine, pteridine, isoalloxazine	2	6	0,5	7	[1,2,3,4,5,6,8,9]	Test, protocol of practical work
2.8	Quality control of medicines in pharmacy	6	15	3	17,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work
2.9	Determination of medicinal substances and their metabolites in biological fluids	6	6	3	7	[1,2,3,4,5,6,8,9]	Test, test work, situational tasks, exam
3.1	Modern methodology of creating original medicines	2	-	0,5		[1,2,3,4,5,6,8,9]	
7 semester							
3.1	Modern methodology of creating original medicines	2	4	1	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work
3.2.1	Means for anesthesia and for local anesthesia	2	4	0,5	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work
3.2.2	Hypnotic, anticonvulsant and antiparkinsonian remedies	2	4	0,5	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work
3.2.3	Neuroleptics, anxiolytics, antidepressants, psychostimulants and nootropics	2	4	0,5	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work
3.3.1	Narcotic analgesics and antagonists of opioid receptors	2	4	0,5	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work
3.3.2	Non-narcotic analgesics-antipyretics and non-steroidal anti-inflammatory remedies	2	4	0,5	10,5	[1,2,3,4,5,6,8,9]	Test, final test
3.4	Remedies affecting cholinergic receptors	2	4	0,5	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work
3.5.1	Adrenoreceptor agonists and sympathomimetics	1	4	0,5	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work
3.5.2	Adrenoreceptor antagonists and sympatholytics	1	4	0,5	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work
3.6	Remedies that affect serotonin receptors	2	4	0,5	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work
3.7	Histamine receptor antagonists and antisecretory remedies	2	4	0,5	7	[1,2,3,4,5,6,8,9]	Test, protocol of practical work
3.8	Inhibitors of phosphodiesterase	1	4	0,5	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work
3.9	Antitussive and expectorants remedies	1	4	0,5	3,5	[1,2,3,4,5,6,8,9]	Test, final test
3.10.1	Means for the treatment of heart diseases	2	4	0,5	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work

3.10.2	Calcium channel blockers. Means that affect the reninangiotensin system	2	4	0,5	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work
3.10.3	Antiarrhythmics, statins, diuretics, anticoagulants and antiagregants	4	2	1	10,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work, credit
8 semester							
3.11	Thyroid hormones and oral hypoglycemic remedies	2	3	0,5	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work
3.12.1	Corticosteroids	2	3	0,5	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work
3.12.2	Gestagenes, androgens and estrogens	2	3	0,5	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work
3.13	Vitamins and their derivatives. Prostaglandins	4	6	2	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work
3.14.1	General characteristics of antibiotics. Beta-lactam antibiotics	2	3	0,5	3,5	[1,2,3,4,5,6,8,9]	Test, final test
3.14.2	The main groups of antibiotics	4	6	2	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work
3.14.3	Synthetic antibacterial remedies	2	6	0,5	3,5	[1,2,3,4,5,6,8,9]	
3.15	Antituberculosis and antimalarial remedies	4	6	2	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work
3.16	Antiviral and antifungal agents remedies	4	6	2	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work
3.17	Antineoplastic remedies	4	6	2	3,5	[1,2,3,4,5,6,8,9]	Test, protocol of practical work
3.18	Diagnostic and radiopharmaceuticals remedies	2	6	1	6	[1,2,3,4,5,6,8,9]	Test, exam