

**Thematic lesson plan of lectures  
in the discipline "Special pharmaceutical chemistry"  
for students for students in 2021 admission  
according to the educational program  
specialist degree  
in the specialty of training 33.05.01 Pharmacy  
direction (profile) Pharmacy,  
form of study full-time (face to face)  
for the 2024-2025 academic year**

<b>№</b>	<b>Topics of lectures</b>	<b>Часы (академ.)</b>
7 semester		
1.	Heterocyclic drugs with one heteroatom in the cycle. Pyridine derivatives.	2
2.	Heterocyclic drugs with one heteroatom in the cycle. Quinoline derivatives.	
3.	Heterocyclic drugs with two heteroatoms in the cycle. Pyrimidines. Uracil derivatives. Barbituric acid derivatives.	2
4.	Natural drugs and their synthetic analogues. Classification of vitamins. Vitamins of aliphatic series. series.	2
5.	Vitamins of the alicyclic series. Pterin vitamins.	2
6.	Natural remedies and their synthetic analogues. Vitamins of aromatic series. Vitamins of heterocyclic series.	2
7.	Natural drugs and their synthetic analogues. Vitamins are pyridine derivatives. Pyrimidine-thiazole vitamins.	2
8.	Natural drugs and their synthetic analogues. Vitamins - derivatives of isoalloxazine and pyrrole.	2
9.	Alkaloids. Classification. General methods of isolation, purification and separation of alkaloids. Pharmaceutical analysis. Pyridine and piperidine derivatives.	2
8 semester		
1.	Tropane derivatives. Classification. Natural tropane alkaloids and their synthetic analogues.	2
2.	Quinoline and isoquinoline derivatives.	2
3.	Imidazole and bezimidazole derivatives.	2
4.	Phenanthrenisoquinoline derivatives. Natural alkaloids and their synthetic analogues. Analogues in action.	2

5.	Indole derived alkaloids.	2
6.	Purine alkaloids and their synthetic analogues	2
7.	Hormones. Concept, biological role and classification of hormones. Biochemical role of steroids in the body as a prerequisite for drug production. Classification and nomenclature.	2
8.	Thyroid hormones	2
9.	Hydroxyphenylalkylamines. Adrenal medullary hormones and their synthetic analogues	2
9 semester		
1.	Steroids. Classification and nomenclature. Cardiac glycosides	2
2.	Corticosteroids. Steroid esters.	2
3.	Androgens and anabolics. Androgenic hormones as drugs.	2
4.	Gestagens and their synthetic analogues. Estrogens. Synthetic analogues of estrogens of non-steroidal structure.	2
5.	Chemical classification of antibiotics. Current state of the science of antibiotics. Penicillins.	2
6.	Cephalosporins. Antibiotics of the aromatic series..	2
7.	Aminoglycosides	2
8.	Tetracyclines	2
9.	Antitumour antibiotics	2
	Total	54

Considered at the meeting of the department of Pharmaceutical and Toxicological Chemistry, pharmacognosy and botany "28" August 2024, protocol No1

Head of the Department



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