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

№	Lecture-type class topics	Hours (academic)
7th semester		
1.	Heterocyclic drugs with one heteroatom per cycle.[1] Pyridine derivatives. [2]	2
2.	Heterocyclic drugs with one heteroatom per cycle.1 Quinoline derivatives.[2]	2
3.	Heterocyclic drugs with two heteroatoms in a cycle.[1] Pyrimidines. Uracil derivatives. Derivatives of barbituric acid.[2]	2
4.	Natural medicines and their synthetic analogues.[1] Classification of vitamins. Vitamins of the aliphatic series. [2]	2
5.	Natural medicines and their synthetic analogues.[1] Vitamins of the alicyclic series. Pterine vitamins.[2]	2
6.	Natural medicines and their synthetic analogues.[1] Aromatic vitamins. Vitamins of the heterocyclic series.[2]	2
7.	Natural medicines and their synthetic analogues.[1] Vitamins are pyridine derivatives. Pyrimidino-thiazole vitamins.[2]	2
8.	Natural medicines and their synthetic analogues.[1] Vitamins are derivatives of isoalloxazine and pyrrol.[2]	2
9.	Alkaloids.[1] Classification. General methods of isolation, purification and separation of alkaloids. Pharmaceutical analysis. Pyridine and piperidine derivatives.[2]	2
8th semester		
1.	Derivatives of tropane.[1] Classification. Natural tropane alkaloids and their synthetic analogues.[2]	2
2.	Alkaloids and their synthetic analogues.[1] Quinoline and isoquinoline derivatives.[2]	2
3.	Alkaloids and their synthetic analogues.[1] Imidazole and bezimidazole derivatives.[2]	2
4.	Phenanthrenisoquinoline derivatives.[1] Natural alkaloids and their synthetic analogues. Action analogues.[2]	2
5.	Alkaloids and their synthetic analogues.[1] Alkaloids, derivatives of indole.[2]	2
6.	Alkaloids and their synthetic analogues.[1] Purine alkaloids and their synthetic analogues.[2]	2
7.	Hormones.[1] The concept, biological role and classification of hormones. The biochemical role of steroids in the body as a prerequisite for drug production. Classification and nomenclature.[2]	2

8.	Hormones.[1] Thyroid hormone [2]	2
9.	Hydroxyphenylalkylamines.[1] Hormones of the adrenal medulla and their synthetic analogues.[2]	2
9th semester		
1.	Chemical classification of antibiotics. The current state of antibiotic science.[1] Penicillins.[2]	2
2.	Aminoglycosides.[1] Preparation methods and pharmaceutical analysis.[2]	2
3.	Antitumor antibiotics.[1] Preparation methods and pharmaceutical analysis.[2]	2
	Total	42

[1] - topic
[2] - essential content

Considered at the meeting of the department of Pharmaceutical, Toxicological Chemistry, pharmacognosy and botany "30" May 2025, protocol No1

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