

**Thematic plan for lecture-type classes
in discipline «Pharmacognosy»
for students of 2022 year of admission
under the educational programme
33.05.01 Pharmacy,
Specialist's degree,
form of study full-time
for the 2025-2026 academic year**

| № | Topics of lecture-type classes | Hours (academic) |
|-------------------|--|-----------------------------|
| 5 semester | | |
| 1 | Pharmacognosy as a science and academic discipline. Tasks and its role in the practical activity of a pharmacologist. Classification systems of medicinal plant raw materials. | 2 |
| 2 | Basics of the procurement process. Rational methods of collection of medicinal plant raw materials. Processing and storage of raw materials. Influence of environmental factors on the quality of medicinal plant raw materials. | 2 |
| 3 | Pharmacognostic analysis. Methods of pharmacognostic analysis of medicinal plant raw materials. | 2 |
| 4 | Vitamins. Concept, classification, methods of vitamin analysis. Medicinal plants and raw materials containing vitamins. | 2 |
| 5 | Polysaccharides. Concept, classification, methods of analysis of polysaccharides. Medicinal plants and raw materials containing polysaccharides. | 2 |
| 6 | Essential oils. The concept of essential oils. Methods of isolation of essential oils. | 1 |
| 7 | Terpenoids. Medicinal plants and raw materials containing acyclic, monocyclic and bicyclic terpenoids. | 1 |
| 8 | Terpenoids. Medicinal plants and raw materials containing sesquiterpenes. | 2 |
| 9 | Terpenoids. Medicinal plants and raw materials containing aromatic compounds. | 2 |
| 10 | Alkaloids. Concept, classification, methods of analysis. Medicinal plants and raw materials containing acyclic alkaloids and alkaloids with nitrogen in the side chain. | 1 |
| 11 | Alkaloids. Medicinal plants and raw materials containing derivatives of pyrrolidine and pyrrolizidine, pyridine and piperidine, tropane. | 1 |
| 6 semester | | |
| 12 | Alkaloids. Medicinal plants and raw materials containing derivatives of isoquinoline, quinolizidine, quinoline, indole. | 2 |
| 13 | Alkaloids. Medicinal plants and raw materials containing derivatives of imidazole, purine. Medicinal plants and raw materials containing derivatives of diterpene alkaloids, steroidal alkaloids. | 2 |
| 14 | Glycosides. Concept, classification, methods of analysis. Medicinal plants and raw materials containing bitter glycosides. | 2 |
| 15 | Cardiac glycosides. Concept, classification, methods of analysis. Medicinal plants and raw materials containing cardiac glycosides. | 2 |
| 16 | Saponins. Concept, classification, methods of analysis. Medicinal plants | 4 |

| | | |
|-------------------|--|----|
| | and raw materials containing saponins. | |
| 17 | Phenolic compounds. Concept, classification, methods of analysis. Medicinal plants and raw materials containing simple phenols. | 2 |
| 18 | Anthracene derivatives. Concept, classification, methods of analysis. Medicinal plants and raw materials containing anthracene derivatives. | 2 |
| 19 | Flavonoids. ¹ Classification of flavonoids. Distribution of flavonoids in nature. Extraction of flavonoids from plant material. Research methods of flavonoids. Significance of flavonoids. Biosynthesis of flavonoids. | 2 |
| 7 semester | | |
| 20 | Flavonoids. Medicinal plant materials containing flavonoids | 2 |
| 21 | Coumarins. Кумарины. Понятие, классификация, методы анализа. Лекарственные растения и сырье, содержащие кумарины. Хромоны. Понятие, классификация, методы анализа. Лекарственные растения и сырье, содержащие хромоны. | 2 |
| 22 | Дубильные вещества. Понятие, классификация, методы анализа. Лекарственные растения и сырье, содержащие дубильные вещества. | 2 |
| | Total | 42 |

Considered at the department meeting of Pharmaceutical, Toxicological Chemistry, Pharmacognosy and Botany , protocol of «30» May 2025. № 10.

Head of the Department



A.A. Ozerov.