

**Thematic plan for lecture-type classes in discipline « Physiology» for
students of 2025, 2026 year of admission
under the educational programme 33.05.01 Pharmacy,
specialisation (profile) Pharmacy (Specialist's degree),
form of study full-time for the 2026-2027 academic year**

№	Lecture Topics	Hours (academic)
Semester 2		
1.	Physiology and its importance in the future professional activity of a pharmacist. Physiology of excitable tissues.¹ Introduction to Physiology. Physiology is the science of the vital activity of the organism as a whole, its interaction with the external environment, and the dynamics of vital processes. Physiology of excitable tissues. ²	2
2.	Physiology of the central nervous system. Applied aspects of the studied issues in a pharmacist's professional thinking.¹ General Principles of the Central Nervous System. The Role of the CNS in the Adaptive Activity of the Body. The Reflex Principle of the Nervous System. Reflex. Reflex Arc and Reflex Ring. Classification of Reflexes. Principles of the coordination activity of the CNS. Synapses in the CNS. Nervous centers and their properties. ²	2
3.	The physiology of human behavior. Features of higher human nervous activity.¹ Physiology of higher nervous activity and behavior. Conditioned reflex as a form of adaptation of animals and humans to changing conditions of existence. Central architectonics of purposeful behavioral act (P.K.Anokhin). I.P. Pavlov's theory of types of higher nervous activity. Features of human higher nervous activity. I.P. Pavlov's theory of the first and second signal systems. ²	2
Semester 3		
1.	Physiology of the heart. Modern assessment of achievements.¹ Physiological properties: excitability, conductivity, and contractility of the myocardium. The conduction system of the heart. The cardiac cycle and its phases. Electrocardiography. and its characteristics, and its clinical significance. Regulation of heart activity: myogenic, neural and humoral mechanisms. ²	2
2.	Physiology of the blood system. The importance of knowledge of the parameters of the blood system and the mechanisms of their maintenance in the education of a pharmacist.¹ Physiology of the blood system. Physical and chemical properties of blood. Composition, quantity, and functions of blood. Plasma and its composition. Plasma proteins. Red blood cells: structure, quantity, counting methods, and functions. The concept of the blood types system: the ABO system, the Rh system. Conditions for Rh conflict between the mother and the fetus. Physiology of leukocytes. Leukocytes, their types, number, and counting methods. Functions of different types of leukocytes. Leukocyte formula. Physiology of platelets. Platelets, their number, structure, and functions. Factors and phases of blood clotting. Coagulation, anticoagulation, and fibrinolytic systems of blood. ²	2

3.	Physiology of digestion, features, and regulatory mechanisms. The importance of theoretical knowledge and applied aspects in shaping a pharmacist's mindset.¹ Physiological basis of hunger and satiety. Digestion in the oral cavity. Digestion in the stomach. Composition and properties of gastric juice. Regulation of gastric gland secretion. Phases of gastric secretion. Motor and emptying activity of the stomach, its regulation. ²	2
	Total	12

¹ – topic

² – essential content

Approved at the Department of Normal Physiology meeting

Minutes dated «25» May 2026 № 9

Head of the Department



S.V.Klauchek