

**Thematic plan of the student's independent work  
in the discipline "Physiology"  
for students of the 2025 admission year  
in the educational program**

**33.05.01. Pharmacy, specialization (profile) Pharmacy  
(specialization),  
full-time form of study  
for the 2025-2026 academic year**

<b>Nº</b>	<b>The topic of independent work</b>	<b>Hours (academic)</b>
<b>2 semester</b>		
1.	Neurohumoral mechanisms of integrative activity in the body. <sup>1</sup>  Memory. Types of memory. Mechanisms and their significance in the adaptation of the body. Methods of assessment. Learning. Brain and peripheral manifestations. Behavior and psyche. Concept and types (manifestations). Thinking, consciousness and speech. Formation of speech in the age aspect. Speech disorders. Motivations. Classification. Neurophysiological mechanisms of the emergence of motivations. The role of hypothalamic, limbic, and reticular structures in the emergence of motivations. Neurochemistry of sleep. The role of neurotransmitters, peptides, and biologically active substances in the development of sleep and awakening. Electroencephalographic manifestations of sleep. Sleep patterns in people of different ages. The structure of healthy sleep. <sup>2</sup>	28
<b>Independent work control</b>		
2		
<b>3 semester</b>		
2.	Physiology of regional circulation. Lymph circulation. <sup>1</sup>  Features of cerebral blood flow, regulation, and methods of its assessment. Physiological mechanisms of impaired cerebral circulation. Features of blood flow in skeletal muscles, its regulation, and methods of assessment. Blood flow in skeletal muscles and cardiac output during physical activity. Features of celiac and renal blood flow, regulation, and methods of assessment. Features of blood flow in the pulmonary circulation, its regulation, and methods of assessment. Features of coronary blood flow and its regulation. Local and humoral regulation of blood flow in tissues. Lymph circulation. Function of the lymphatic system. Lymphatic vessels. Tension of the lymphatic vessels. Lymph nodes. Functions of the lymph nodes. Lymph flow. Lymph, its composition, quantity, functions. The role of the lymphatic system in the regulation of the volume and pressure of the interstitial fluid and the concentration of proteins in it. <sup>2</sup>	41
<b>Independent work control</b>		
2		
<b>Total hours of IW</b>		
69		
<b>Total hours of control of IW</b>		
4		

<sup>1</sup> - topic

<sup>2</sup> - essential content

Considered at the meeting of the department of Normal physiology «20th» of May 2025, protocol № 10.

Head of the Department  
of Normal physiology



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