

**Thematic plan of independent work of the student
in the discipline "Normal Physiology"
for students 2025 year of admission
of the educational program
specialist degree in the specialty 31.05.01 General Medicine
specialisation (profile) General Medicine
form of study full-time
for the 2025-2026 academic year**

№	The topic of independent work	Hours (academic)
2nd semester 36/4		
1.	Neurohumoral mechanisms of the body's integrative activity The system-structural principle of the study of emotional states. Emotional stress. Resistance to emotional stress. Education of emotions. Emotions and learning. Medical aspects of emotions. Emotional stress and cardiovascular disorders. Features of emotional reactions in the age aspect. Cognitive behavioral approaches to overcoming stress.	
2.	Neurohumoral mechanisms of the body's integrative activity Manifestations of human brain activity. Behavior and psyche. Mentality. The concept, types (manifestations). Thinking, consciousness, speech. Conscious and unconscious. Perceptual (mental) protection. Motivation. Classification. Neurophysiological mechanisms of motivation. Formation of motivations in children. The role of hypothalamic, limbic and reticular structures in the emergence of motivations. Properties of motivational excitation. Disorders of the motivational spectrum.	
3	Neurohumoral mechanisms of the body's integrative activity The 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 for people of different ages. The structure of a healthy person's sleep. Sleep, sleep-like states, anesthesia, hypnosis. Sleep disorders.	
4	Neurohumoral mechanisms of the body's integrative activity Long-term and short-term memory. Mechanisms, importance in the adaptation of the body. Assessment methods. Memory formation in children. Training. Cerebral and peripheral manifestations. Features of teaching methods for adults and children. Possible causes of memory impairment with age and preventive measures to slow the progression of symptoms. The role of cognitive training, different types of brain activity, lifestyle changes in the prevention of dementia.	
	Total for 2nd semester	36
	Control of independent work	2
3rd semester 18/2		
1.	Physiology of blood circulation. Lymph circulation. Human organ and regional blood flow. Redistributive reactions. Features of cerebral blood flow, regulation and methods of its assessment. Physiological mechanisms of cerebral circulation. Features of blood flow in skeletal muscles, its regulation and assessment methods.	

	Blood flow in skeletal muscles and cardiac output during exercise, coronary blood flow and ischemic heart disease. Features of the abdominal and renal blood flow, regulation and assessment methods. Features of blood flow in the small circle of blood circulation (pulmonary circulation), its regulation and assessment methods. Features of coronary blood flow and its regulation. Local and humoral regulation of tissues blood flow.	
2.	Physiology of blood circulation. Lymph circulation. Lymph circulation. Function of the lymphatic system. Lymphatic vessels. Lymphangions. The lymphatic vessels tone. Lymph nodes. Functions of the lymph nodes. Lymph flow. Lymph, its composition, quantity, and functions. The role of the lymphatic system in regulating the volume and pressure of interstitial fluid and the concentration of proteins in it.	
	Total for 3rd semester	18
	Control of independent work	2

Considered at the meeting of the department of Normal physiology "20" May 2025, protocol N 10

Head of the Department



S.V.Klauchek