

**Thematic plan for independent work of a student in discipline
«Normal Physiology» for students of 2025, 2026 year of admission
under the educational programme 31.05.01 General Medicine,
specialisation (profile) General Medicine (Specialist's degree),
form of study full-time for the 2026-2027 academic year**

№	Independent work topic	Hours (Academic)
Semester 2		
1.	Neurohumoral mechanisms of the body's integrative activity.	35
	Section 1. System-structural principle of the study of emotional states. 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.	10
	Section 2. Manifestations of human brain activity. Manifestations of human brain activity. Behavior and psyche. Mentality. The concept, types (manifestations). Thinking, consciousness, speech. Formation of speech in the age aspect. Speech disorders. Conscious and unconscious. Perceptual (mental) protection. Motivation. Classification. Neurophysiological mechanisms of motivation. The role of hypothalamic, limbic and reticular structures in the emergence of motivations. Properties of motivational excitation. Disorders of the motivational spectrum.	10
	Section 3. The neurochemistry of sleep. 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.	7
	Section 4. Long-term and short-term memory. 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 deterioration, memory disorders 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.	7

№	Independent work topic	Hours (Academic)
Assessment Section		1
Semester 3		
2.	Physiology of blood circulation. Lymph circulation.	18
Section 1. Human organ and regional blood flow. Redistributive reactions. Human organ and regional blood flow. Redistributive reactions. Features of cerebral blood flow, regulation and methods of its assessment. Physiological mechanisms of disorders 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, its regulation and assessment methods. Features of coronary blood flow and its regulation. Local and humoral regulation of blood flow in tissues.		10
Section 2. Lymph circulation. Function of the lymphatic system. Lymph circulation. Function of the lymphatic system. Lymphatic vessels. Lymphangions. The tone of lymphatic vessels. Lymph nodes. Functions of the lymph nodes. Lymph flow. Lymph, its composition, quantity, functions. The role of the lymphatic system in regulating the volume and pressure of interstitial fluid and the concentration of proteins in it.		7
Assessment Section		1

Approved at the Department of Normal Physiology meeting
Minutes dated «25» May 2026 № 9

Head of the Department



S.V.Klauchek