APPROVED
Head of Physiology and Pathophysiology Department with course of Medical Biology
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Calendar and Thematic plan
PRACTICAL CLASSES OF PHYSIOLOGY
for students of SSU Medical Institute
in speciality I2 - "MEDICINE"
for the autumn semester of the 2025-2026 academic years

№	Themes of practical classes	Hours
1.	The subject and tasks of physiology.	2
2.	The main stages of the development of physiology. Methods of physiological research.	2
3.	Functional properties of cell membranes.	2
4.	Resting potential of nerve and muscle fibers.	2
5.	Action potential of nerve and muscle fibers.	2
6.	Preparation of a neuromuscular preparation.	2
7.	Mechanisms of electrical stimulation of excitable structures.	2
8.	Study of bioelectric phenomena in living tissues.	2
9.	Conduction of excitation along nerve and muscle fibers.	2
10.	Calculation work from the section "Electrophysiology".	2
11.	Contraction of skeletal and smooth muscles.	2
12.	Study of the main characteristics of muscle contraction.	2
13.	Solving situational tasks from content module 1 "Introduction to physiology. Physiology of excitatory structures".	2
14.	**Final lesson from content module 1 "Introduction to physiology. Physiology of excitatory structures".**	2
15.	General patterns of nervous regulation of functions.	2
16.	Analysis of the reflex arc.	2
17.	Excitation and inhibition in the central nervous system.	2
18.	Study of inhibition of spinal reflexes.	2
19.	The role of the spinal cord in the regulation of body functions.	2
20.	Study of clinically important spinal reflexes in humans.	2
21.	The role of the hindbrain in the regulation of body functions.	2
22.	The role of the midbrain and basal nuclei in the regulation of body functions.	2
23.	The role of the cerebellum, thalamus and hypothalamus in the regulation of body functions.	2
24.	Determination of functional asymmetry of the cortex of the large hemispheres.	2
25.	Nervous regulation of vegetative functions.	2
26.	Research of autonomic tone and autonomic reactivity in humans.	2
27.	Calculation work and solution of situational tasks from content module 2 "Nervous regulation of body functions".	2

28.	**Final lesson from content module 2 "Nervous regulation of body functions".**	2
29.	General patterns of humoral regulation of vegetative functions.	2
30.	Hypothalamic-pituitary system.	2
31.	The role of hormones in the regulation of physical and mental development.	2
32.	The role of hormones in the regulation of sexual development.	2
33.	The role of hormones in the regulation of homeostasis.	2
34.	The role of hormones in regulating the body's adaptation to stress factors.	2
35.	Solving situational tasks from content module 3 "Humor regulation of body functions".	2
36.	**Final lesson from content module 3 "Humoral regulation of body functions".**	2
37.	Sensor systems. Study of the somatosensory analyzer.	2
38.	Visual analyzer.	2
39.	Auditory and vestibular analyzers.	2
40.	Study of the properties of visual, auditory and vestibular analyzers.	2
41.	Physiological bases of behavior.	2
42.	Higher nervous activity of a person.	2
43.	Study of cognitive processes and types of higher human nervous activity.	2
44.	Individual work of students from module 4 "Physiology of analyzers and HNA".	2
45.	**Final lesson from content module 4 "Physiology of analyzers and HNA ".**	2
Total		**90**