

## COURSE DESCRIPTOR

№	Topic	Total, hours	Lectures, hours	Workshops (seminars), hours	Labs, hours	Self-study of the material, hours	Individual tasks, hours
<b>full-time course form of study</b>							
Module 1. Introduction to physiology. Physiology of excitable structures							
1	Subject and tasks of physiology	3	0	2	0	1	0
2	The main stages of development of physiology. Methods of physiological research	4	0	2	0	2	1
3	The potential for rest of nerve and muscle fibers	5	2	2	0	1	0
4	Preparation of a neuromuscular preparation	3	0	2	0	1	0
5	The potential of nerve and muscle fibers	3	0	2	0	1	0
6	Study of bioelectrical phenomena in living tissues	3	0	2	0	1	0
7	Mechanisms of electrical stimulation of excitatory structures and conduction of excitation through nerve and muscle fibers	3	0	2	0	1	0
8	Solving situational problems from the section "Electrophysiology".	3	0	2	0	1	0
9	Skeletal and smooth muscle contractions	3	0	2	0	1	0
10	Study the main characteristics of muscle contraction	3	0	2	0	1	0
11	Calculation work from the content module 1 "Introduction to physiology. Physiology of excitable structures".	3	0	2	0	1	0
12	Final lesson from module 1 "Introduction to physiology. Physiology of excitable structures".	4	0	2	0	2	0
Module 2. Nervous regulation of body functions							
1	General patterns of nervous regulation of functions	5	2	2	0	1	0
2	Reflex arc analysis. Study of excitation and inhibition in the CNS	3	0	2	0	1	0
3	The role of the spinal cord in the regulation of body functions	5	2	2	0	1	0
4	Study of clinically important spinal reflexes in humans	3	0	2	0	1	0
5	The role of the brain in the regulation of body functions	5	2	2	0	1	0

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6	Study of the functional asymmetry of the cortex of the large hemispheres	3	0	2	0	1	0
7	Nervous regulation of autonomic functions	3	0	2	0	1	0
8	Study of autonomic tone and autonomic reactivity in humans	3	0	2	0	1	0
9	Calculation work and solution of situational problems from the content module 2 "Nervous regulation of body functions"	3	0	2	0	1	0
10	Final lesson from module 2 "Nervous regulation of body functions".	4	0	2	0	2	0
<b>Module 3. Humoral regulation of body functions</b>							
1	General regularities of humoral regulation of vegetative functions	5	2	2	0	1	0
2	The concept of endocrine function and its components	3	0	2	0	1	0
3	Hypothalamic-pituitary system. The role of liberins and statins	3	0	2	0	1	0
4	The role of hormones in the regulation of physical, mental and sexual development	5	2	2	0	1	0
5	The role of hormones in the regulation of homeostasis	3	0	2	0	1	0
6	The role of hormones in regulating the body's adaptation to stress factors	4	0	2	0	2	1
7	Solving situational problems from the content module 3 "Humoral regulation of body functions".	3	0	2	0	1	0
8	Final lesson from module 3 "Humoral regulation of body functions".	4	0	2	0	2	0
<b>Module 4. Physiology of analyzers and HNA</b>							
1	Investigation of sensory systems	3	0	2	0	1	0
2	Investigation of HNA in humans	3	0	2	0	1	0
3	Physiological bases of behavior	4	0	2	0	2	2
4	Final lesson from module 4 "Physiology of analyzers and HNA".	4	0	2	0	2	0
<b>Module 5. Physiology of the blood system</b>							
1	Physico-chemical properties of blood	5	2	2	0	1	0

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2	Determination of ESR	3	0	2	0	1	0
3	Properties and functions of erythrocytes	5	2	2	0	1	0
4	Counting the number of erythrocytes. Determination of hemoglobin level	3	0	2	0	1	0
5	Protective properties of blood	3	0	2	0	1	0
6	Determination of blood groups	3	0	2	0	1	0
7	Hemostasis system	5	2	2	0	1	0
8	Evaluation of clinical blood test. Calculation work from the content module 5 "Physiology of blood".	3	0	2	0	1	0
9	Solving situational problems from the content module 5 "Physiology of blood".	4	0	2	0	2	0
10	Final lesson from module 5 "Physiology of the blood system".	3	0	2	0	1	0
<b>Module 6. Physiology of the cardiovascular system</b>							
1	General characteristics of the circulatory system	5	2	2	0	1	0
2	Study of the functioning of the conduction system of the frog's heart. Ligatures of Stanius	3	0	2	0	1	0
3	Mechanical work of the heart. Phase analysis of the cardiac cycle	5	2	2	0	1	0
4	Study of apical impulse and heart tones	3	0	2	0	1	0
5	Electrocardiography	3	0	2	0	1	0
6	Calculation work "ECG registration and analysis".	3	0	2	0	1	0
7	Fundamentals of hemodynamics. Patterns of blood flow in arterial and venous vessels.	5	2	2	0	1	0
8	Measurement of blood pressure in humans.	3	0	2	0	1	0
9	Regulation of the heart, local and systemic circulation.	6	2	2	0	2	2
10	Investigation of functional tests of the cardiovascular system.	3	0	2	0	1	0
11	Solving situational problems from the content module 6 "Physiology of the cardiovascular system".	3	0	2	0	1	0

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12	Final lesson from module 6 "Physiology of the cardiovascular system".	4	0	2	0	2	0
Module 7. Physiology of the respiratory system							
1	General characteristics of the respiratory system. Research of indicators of external respiration.	5	2	2	0	1	0
2	Calculation work "Registration and analysis of spirogram".	3	0	2	0	1	0
3	Gas exchange in the lungs. Blood gas transport. Regulation of respiration.	5	2	2	0	1	0
4	Investigation of functional tests of the respiratory system	3	0	2	0	1	0
Module 8. Physiology of the digestive system							
1	General characteristics of the digestive system	5	2	2	0	1	0
2	Digestion in the mouth and stomach	3	0	2	0	1	0
3	Digestion in the intestines. The role of the liver and pancreas	5	2	2	0	1	0
4	Absorption in the gastrointestinal tract	4	0	2	0	2	1
Module 9. Physiology of metabolism and energy. Thermoregulation							
1	Metabolism and energy. Thermoregulation	5	2	2	0	1	0
2	Estimated work "Compilation of food ration".	5	0	2	0	3	0
Module 10. Physiology of the excretory system							
1	General characteristics of the selection system. Regulation of kidney function.	5	2	2	0	1	0
2	Calculation work "Determination of filtration and reabsorption in the kidneys."	3	0	2	0	1	0
3	Solving situational problems from the content modules 7 - 10 "Physiology of the respiratory system", "Physiology of the digestive system", "Physiology of metabolism". Thermoregulation ", " Physiology of selection ".	3	0	2	0	1	0
4	Final lesson from modules 7 - 10 "Physiology of the respiratory system", "Physiology of the digestive system", "Physiology of metabolism and energy". Thermoregulation ", " Physiology of the excretory system ".	4	0	2	0	2	0
5	Practical skills from the course "Physiology".	4	0	2	0	2	0

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6	Preparation for the license exam "KROK-1".	4	0	2	0	2	0
<i>Total (full-time course form of study)</i>		<i>270</i>	<i>38</i>	<i>144</i>	<i>0</i>	<i>88</i>	<i>7</i>