

Summary of the working program of the academic discipline

«PATHOLOGICAL PHYSIOLOGY, PATHOPHYSIOLOGY OF HEAD AND NECK »

General Educational Program of higher education **31.05.03 DENTISTRY**

Department: **PATHOLOGICAL PHYSIOLOGY**

1. The purpose of mastering the discipline: participation in forming the relevant competencies UC 1, GPC 1,8,9, PC 1,6,12.

2. Position of the academic discipline in the structure of the General Educational Program (GEP).

2.1. The discipline refers to the core part of Block 1 of GEP HE (Academic discipline index B.1. O.20.).

3. Deliverables of mastering the academic discipline and metrics of competence acquisition

Mastering the discipline aims at acquiring the following universal (UC) or/and general professional (GPC) or/and professional (PC) competencies

№	Competence code	The content of the competence (or its part)	Code and name of the competence acquisition metric	As a result of mastering the discipline, the students should:		
				to know	to be able to	to possess
1.	UC-1	UC-1 Able to carry out critical analysis of problem situations based on a systematic approach, develop a strategy for the actions	1.1 Knows: methods of critical analysis and evaluation of modern scientific achievements; basic principles of critical analysis 1.2 Able to: gain new knowledge based on analysis, synthesis, etc.; collect data on complex scientific problems related to the professional field; search for information and solutions based on actions, experiment and experience	the importance of pathophysiology for the development of medicine and public health; connection of pathophysiology with other medical-biological and medical disciplines	to solve professional tasks of a doctor based on pathophysiological analysis of specific data on pathological processes, conditions, reactions and diseases	principles of evidence-based medicine based on the search for solutions using theoretical knowledge and practical skills
2.	GPC-1	GPC-1 Able to implement moral and legal norms, ethical and deontological principles in the professional activity	1.1 Knows: fundamentals of medical ethics and deontology; fundamentals of legislation in the field	fundamentals of medical ethics and deontology based on	solve professional tasks of a doctor based on pathophysio	fundamentals of medical ethics and deontology based on

			of healthcare; legal aspects of medical activity	knowledge of the etiopathogenesis of diseases	logical analysis using ethical and deontological principles	knowledge of the etiopathogenesis of diseases
3.	GPC-8	GPC-8 Able to use basic physical and chemical, mathematical and natural science concepts and methods in solving professional problems	8.1 Knows: basic physical and chemical, mathematical and natural science concepts and methods used in medicine 8.2 Able to: interpret data from basic physical and chemical, mathematical, and natural science research methods when solving professional problems	basic natural science concepts and methods used in pathophysiology	interpret data from basic blood tests, urine tests, acid-base balance, bilirubin metabolism, etc. when solving professional tasks	skills in analyzing the main methods for assessing the functional state of the human body and their specific results
4.	GPC-9	GPC-9 Able to assess morphofunctional states and pathological processes in the human body to solve professional problems	9.1 Knows: pathological physiology of human organs and systems 9.2 Able to: assess the main morphofunctional data, physiological conditions and pathological processes in the human body	features of general pathophysiology, pathological physiology of human organs and systems, pathophysiology of head and neck.	to assess the main morphofunctional data, physiological conditions and pathological processes in the human body	skills in analyzing basic morphofunctional data for various pathological processes in the body
5.	PC-1	PC- 1 Able and ready to implement a set of measures aimed at preserving and strengthening health and including the formation of a healthy lifestyle of the patient (their relatives/ legal representatives). Prevention of the occurrence and / or spread of dental diseases, their early diagnosis, identification of the causes and conditions of occurrence and development, as well as	1.1 Knows: pathological physiology of the maxillary system, its relationship with the functional state of other body systems and the levels of their regulation	basic concepts of general nosology; pathological physiology of the maxillary system, its relationship with the functional state of other body systems and levels of their regulation	solve professional tasks of a doctor based on pathophysiological analysis of specific data on pathological processes, conditions, reactions and diseases of the maxillary system	skills in analyzing the relationship between the pathophysiological processes of the dentoalveolar system and the functional state of other body systems

		prevention.				
6.	PC-6	PC-6 Ready to collect and analyze complaints and other information from the patient (relatives/ legal representatives), his / her medical history, interpretation of the results of examination, laboratory, instrumental, and other studies in order to recognize the condition or establish the fact of the presence or absence of dental diseases, symptoms, syndromes of dental diseases	6.1 Able to: interpret the results of examination, laboratory, instrumental and other studies in order to recognize the condition or establish the fact of the presence or absence of dental diseases, symptoms, and syndromes of dental diseases	basic results of laboratory and instrumental studies aimed at recognizing the condition or establishing the presence or absence of a dental condition	conduct a pathophysiological analysis of clinical, laboratory, experimental, and other data and formulate a conclusion based on them about the most likely causes and mechanisms of the development of pathological processes	skills in pathophysiological analysis of examination results, laboratory, instrumental and other studies
7.	PC-12	PC-12 Able to participate in scientific research, analysis and public presentation of medical information based on evidence-based medicine and to participate in the introduction of new methods and techniques aimed at protecting public health and reducing dental morbidity.	12.1 Knows: fundamentals of evidence-based medicine; main sources of medical information based on evidence-based medicine; methods and forms of public presentation of medical information; basic principles of medical scientific research 12.2 Ability to: search for medical information based on evidence-based medicine; interpret data from scientific publications; critically evaluate modern methods of diagnosis, prevention and treatment of diseases from the point of view of evidence-based	fundamentals of evidence-based medicine; main sources of medical information based on evidence-based medicine; methods and forms of public presentation of medical information; basic principles of medical scientific research	Search for medical information based on evidence-based medicine; interpret data from scientific publication; critically evaluate modern methods of diagnosis, prevention and treatment of diseases from the point of view of evidence-based medicine; explain your choice of methods of diagnosis, prevention	Methods of searching for medical information based on evidence-based medicine; Methods of preparing a presentation of medical information, scientific research results

			<p>medicine;</p> <p>explain your choice of methods of diagnosis, prevention and treatment of dental diseases;</p> <p>prepare a presentation of medical information, and scientific research results</p>		and treatment of dental diseases	
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4. Volume of the academic discipline and types of academic work

Total labor intensity of the discipline is 5 CU (180 AH)

Type of educational work	Labor intensity		Labor intensity (AH) in semesters			
	volume in credit units (CU)	volume in academic hours (AH)	3		4	
Classroom work, including	2.4	86	44		42	
Lectures (L)	0.5	18	10		8	
Laboratory practicum (LP)*						
Practicals (P)	1.9	68	34		34	
Seminars (S)						
Student's individual work (SIW)	1.6	58	28		30	
Mid-term assessment						
exam	1	36			36	
TOTAL LABOR INTENSITY	5	180	72		108	

5. Sections of the academic discipline and competencies that are formed

№	Competence code	Section name of the discipline	The content of the section in teaching units
1	UC 1 GPC 1,8,9 PC 1,6,12	General nosology	<p>Subject and tasks of pathophysiology.</p> <p>Basic concepts of nosology.</p> <p>Pathogenic effects of external environmental factors.</p> <p>Modeling of major dental diseases.</p>
2	UC 1 GPC 1,8,9 PC 1,6,12	Typical pathological processes	<p>Acute non-specific cell injury. Features of the reaction of pulp cells, mucous membranes and of bone tissue for acute and chronic damage.</p> <p>Disorders of peripheral blood circulation and microcirculation. Microcirculation disorders in the development of pathological processes in maxillofacial region.</p> <p>Disorders of barrier functions of the body. Blood-salivary barrier.</p> <p>Acute inflammation. Etiology and pathogenesis of maxillofacial inflammatory processes. Sialoses and sialoadenitis: their pathogenesis, principles of modeling and diagnostics of salivary gland diseases.</p>

			<p>Wound healing. Pathology of the wound healing in the tissues of the dento-maxillofacial region.</p> <p>Fever. Overheating. Overcooling.</p> <p>Pathophysiology of water-salt metabolism. Edema. Pathophysiology of phosphorus-calcium metabolism, osteoporosis, osteomalacia.</p> <p>Pathophysiology of the acid-base balance (ABB). The role of ABB in the development of caries and inflammatory diseases, periodontal diseases and pathology of the oral mucosa.</p> <p>Pathophysiology of protein, lipids and carbohydrates' metabolism. The role of metabolic disorders in the development of pathology of the dento-maxillofacial region.</p> <p>Tumor growth. The most important etiological factors in the development of head and neck tumors.</p> <p>Hypoxia. The role of hypoxia in the development of dental diseases.</p>
3	<p>UC 1</p> <p>GPC 1,8,9</p> <p>PC 1,6,12</p>	<p>Pathophysiology of organs and systems</p>	<p>Pathophysiology of red blood cells. Mechanisms of disorders in the oral cavity tissues in different types of anemia.</p> <p>Pathophysiology of white blood cells. Changes in the oral in disorders of the white blood cells. Hemoblastosis: their pathogenesis and dental manifestations.</p> <p>Pathophysiology of hemostasis. Significance of hemostatic disorders in the development of dental diseases.</p> <p>Pathophysiology of external respiration. The role of respiratory disorders in the formation of the dental-maxillary system. Changes in external respiration with deformities of the jaws and diseases of the dento-maxillofacial region.</p> <p>Pathophysiology of the cardiovascular system. Heart failure. Coronary insufficiency. Cardiac arrhythmias. Disorders of vascular tone. Arterial hyper-and hypotension. Peculiarities of major dental diseases in patients with arterial hypertension.</p> <p>Pathophysiology of the gastrointestinal system. Peptic ulcer disease. Relationship of gastrointestinal pathology with the state of the oral cavity.</p> <p>Pathophysiology of the liver. The role of liver pathology in the development of dental diseases.</p> <p>Pathophysiology of the kidneys. The role of kidney pathology in the development of diseases of dento-maxillofacial region.</p> <p>Pathophysiology of the nervous system. Pain.</p> <p>Pathophysiology of the endocrine system. Manifestations of endocrine pathology in stomatology.</p>