Документ подписан простой электронной подписью
Информация о владельце:
ФИО: Кузнецов Владимир Вячеславович
Должность: И.о. ректора
Дата подписания: 13.01.2026 14:04:42
Уникальный программный ключ:
89bc0900301c561c0dcc38a48f0e3de679484a4c

Federal State Budget Educational Institution
of Higher Education
Pacific State Medical University
of the Ministry of Health of the Russian Federation

APPROVED BY
First Vice-Rector
_____ / Trankovskaya L.V./
"9" июня 2025

DISCIPLINE WORK PROGRAM

Б1.О.14 Pathological physiology. Pathophysiology of head and neck

(name of discipline)

Specialty	**31.05.03 Dentistry for international students (in English)** (code, name)
Degree	Specialist's degree
Profile	02 "Healthcare" (in the field of providing health care in patients with dental pathology)
Mode of study	Full-time
Period of mastering the BEP	**5 years** (nominal length of study)
Institute/Department	of Human Physiology and Pathophysiology

Vladivostok, 2025

Program of the discipline **Б1.О.14 Pathological physiology. Pathophysiology of head and neck** is based on:
1) Federal State Educational Standard of Higher Education for the specialty approved by the Order No. 984 of Ministry of Science and Higher Education of the Russian Federation
dated August 12, 2020.

2) Curriculum for the 31.05.03 Dentistry for international students (in English), profile 02 "Healthcare" (in the field of providing health care in patients with dental pathology),
approved by the Academic Council of FSBEI HE PSMU of the Ministry of Health of Russia
Report No. 8/24-25 dated March 31, 2025.

Work program for the discipline was developed by the writing team of the Department of Human Physiology and Pathophysiology of the FSBEI HE PSMU of the Ministry of Health of Russia, under the guidance of the Head of the Department of Human Physiology and Pathophysiology, Doctor of Medical Sciences, Professor Markelova E.V.

Developed by:

Assistant professor	Candidate of Medical Sciences, Associate Professor	Knysh S.V.
(position held)	(academic degree, academic title)	(full name)

1. GENERAL PROVISIONS

1.1. Purpose and Objectives of Mastering Б1.О.14 Pathological physiology. Pathophysiology of head and neck

The purpose of mastering the discipline is developing ability to effectively solve professional medical problems based on pathophysiological analysis of data on pathological processes, clinical syndromes and diseases using knowledge of general patterns of their occurrence, progression, and outcomes, as well as mastering principles (algorithms, strategies) and methods for their detection (diagnosis), treatment, prevention and rehabilitation.

Objectives of mastering the discipline:

1. Learning basic concepts and modern ideas of general nosology, social, and biological causality of diseases;
2. Studying etiology, pathogenesis, principles of detection, treatment, and prevention of the most socially significant clinical syndromes, diseases, and pathological processes in dentistry;
3. Developing the ability to conduct pathophysiological analysis of data on pathological processes, clinical syndromes, typical forms of pathology and select diseases;
4. Developing methodological and methodological skills of clinical thinking and rational action of a doctor.

2. DISCIPLINE AS PART OF THE BASIC EDUCATIONAL PROGRAM

Discipline **Б1.О.14 Pathological physiology. Pathophysiology of head and neck** is included in the mandatory part of the Unit 1 of the basic educational program for the specialty 31.05.03 Dentistry for international students (in English) and is part of the 4th and 5th semesters' curriculum.

3. PLANNED LEARNING OUTCOMES OF THE DISCIPLINE

3.1. Mastering the discipline **Б1.О.14 Pathological physiology. Pathophysiology of head and neck** is aimed at the development of students' competencies. The discipline facilitates the development of students' competencies corresponding to the types of professional activity.

Competency Code	**Competency Description**	**Competency Indicators**
General Professional Competencies		
Basis of fundamental and natural science knowledge	GPC-9. Is able to assess morphofunctional status, physiological states, and pathological processes in the human body when working to achieve objectives of professional activity	CI.GPC-9_1- assesses the morphofunctional state of organs CI.GPC-9_2- distinguishes between pathological and physiological processes, identifies etiology of changes CI.GPC-9_3- provides diagnostic assessment of the identified changes

3.2. Types of professional activity corresponding to competencies developed over the course of mastering **Б1.О.14 Pathological physiology. Pathophysiology of head and neck**:

Types of professional activity objectives

1. *-Medical*

Kinds of professional activity objectives

1. *Examination of the patient in order to make a diagnosis*
2. *prescribing pharmacological and non-pharmacological treatment and monitoring its efficiency and safety*

3.3. Planned learning outcomes of mastering the discipline are represented by knowledge, skills, abilities and/or experience, characterize the stages of developing competencies and ensure achievement of the planned outcomes of mastering the basic educational program. Learning outcomes of a discipline are correlated with competency indicators.

4. SCOPE AND CONTENT OF THE DISCIPLINE

4.1. Scope of the Discipline and Types of Academic Work

Type of Academic Work		Total Hours	Semesters	
			4	5
			hours	hours
1		2	3	4
Classroom hours (total), including:		**114**	**72**	**42**
Lectures (L)		34	20	14
Practical classes (C)		80	52	28
Independent work of the student (IW), including:		**66**	**36**	**30**
Electronic educational resource (EER)		-	-	-
Preparing for classes (CP)		44	30	14
Preparing for continuous assessment (CAP)		10	6	4
Preparation for interim assessment (IAP)		12	-	12
Interim assessment		36	-	36
Type of interim assessment	pass/fail test (T)	-	-	-
	exam (E)	E	-	E
TOTAL: TOTAL credit value	hrs.	**216**	**108**	**108**
	credits	**6**	**3**	**3**

4.2. Contents of the Discipline

4.2.1. Topics of Discipline Lectures and Academic Hours per Semester

No.	Lecture Topic	Hours
1	2	3
	Semester No. 4	
1.	Subject, objectives, and methods of pathophysiology (pathophysiology of head and neck). Main concepts of general nosology. General etiology and pathogenesis	2
2.	Impairment of peripheral circulation and microcirculation	2
3.	Pathophysiology of hypo- and hyperoxia	2
4.	Physiology of inflammation. Acute phase response. Fever	2
5.	Reactivity (responsiveness) and resistance of the organism. Role in pathologic processes. Somatotype (body type). Heredity	2
6.	Pathophysiology of immune reactivity disorders	2
7.	Pathophysiology of hypersensitivity reactions	2
8.	Pathophysiology of water- mineral metabolism and acid-base balance	2
9.	Pathophysiology of tumor growth. Systemic influence of a tumor on the organism	2
10.	Pathophysiology of blood system disorders	2
	Hours per semester total	**20**
	Semester No. 5	
1.	Pathophysiology of cardiovascular diseases	2
2.	Pathophysiology of respiratory system disorders	2
3.	Pathophysiology of digestive system and excretory system disorders	2
4.	Pathophysiology of endocrine diseases	2
5.	Pathophysiology of nervous system disorders	2

6.	Pathophysiology of immune diseases	2
7.	Pathophysiology of extreme conditions	2
	Hours per semester total	**14**

4.2.2. Topics of Discipline Practical Classes and Academic Hours per Semester

No.	Practical Class Topic	Hours
1	2	3
	Semester No. 4	
1	Subject, objectives, and methods of pathophysiology. Main concepts of general nosology. General etiology and pathogenesis	4
2	Impairment of peripheral circulation and microcirculation	4
3	Pathophysiology of hypo- and hyperoxia	4
4	Physiology of inflammation	4
5	Physiology of acute phase response. Fever. Hyperthermia and hypothermia	4
6	Reactivity (responsiveness) and resistance of the organism. Role in pathologic processes. Somatotype (body type). Heredity Interim knowledge control	4
7	Pathophysiology of immune reactivity disorders	4
8	Pathophysiology of hypersensitivity reactions	4
9	Pathophysiology of water- mineral metabolism and acid-base balance	4
10	Pathophysiology of metabolism	4
11	Pathophysiology of tissue growth. Biological characteristics of malignant cells. Etiology and pathogenesis of malignant growth. Antitumoral resistance	4
12	Pathophysiology of the infectious process Interim knowledge control	4
13	Pathophysiology of blood system disorders	4
	Hours per semester total	**52**
	Semester No. 5	
1	Pathophysiology of cardiovascular diseases	4
2	Pathophysiology of respiratory system disorders	4
3	Pathophysiology of digestive system and excretory system disorders Interim knowledge control	4
4	Pathophysiology of endocrine diseases	4
5	Pathophysiology of nervous system disorders	4
6	Pathophysiology of immune diseases	4
7	Pathophysiology of extreme conditions Interim knowledge control	4
	Hours per semester total	**28**

4.2.3. Independent Work of the Student

No.	Name of the Discipline Section	Type of IW	Total Hours
1	3	4	5
	Semester No. 3		
1	General pathophysiology. Typical forms of disorders	Working with lecture notes, supplementary reading, and subject guides Preparing labeled flow-charts	30
2	Preparation for continuous	Working with lecture notes, subject	6

	assessment	guides, and supplementary reading	
	Hours per semester total		**36**
	Semester No 4		
1	Special (specialty) pathophysiology	Working with lecture notes, supplementary reading, and subject guides Preparing labeled flow-charts	14
2	Preparation for continuous assessment	Working with lecture notes, subject guides, and supplementary reading	4
3	Preparation for interim assessment	Working with lecture notes, subject guides, and supplementary reading	12
	Hours per semester total		**30**

5. REQUIREMENTS FOR IMPLEMENTATION OF DISCIPLINE

5.1. Discipline Requirements for Educational Materials and Provided Information

Essential reading

No.	Name/Title, Resource Type	Author(s)/Editor	Publisher Imprint, Web Address	Number of Copies (accesses) in the Library and Information Center
1	2	3	4	5
1	Pathophysiology: concise lectures, tests, cases : tutorial guide	P. F. Litvitsky, S. V. Pirozhkov, I. A. Budnik.	4th ed. - Moscow : GEOTAR-Media, 2025. - 376 c. - ISBN 978-5-9704-8600-9, DOI: 10.33029/9704-8600-9-PAT-2025-1-376. - Electronic version available on the site of EBS "Student's Consultant" : [website]. URL: https://www.studentlibrary.ru/book/ISBN9785970486009.html (date of reference: 03.06.2025). - Access mode: by subscription. - Text: electronic	Unlimited access
2	Pathophysiology : Course of Lectures	G. V. Poryadin, J.M. Salmasi	M. : MIA, 2020. - 572 + IV p. - ELS "Medlib"	Unlimited access

Supplementary reading

No.	Name/Title, Resource Type	Author(s)/Editor	Publisher Imprint, Web Address	Number of Copies (accesses) in the Library and Information Center
1	2	3	4	5
1	Pathophysiology of the immune system : учеб. пособие /	E. V. Markelova, A. V. Kostyushko,	- Vladivostok : DV Medicine, 2024. - 160 c.	Unlimited access

		E. P. Turmova et al.	- EBS "BookUp"	
2	Pathophysiology, clinical pathophysiology: general nosology : training manual	B. E. Krasnikov, E. A. Chagina, E. V. Markelova, A. Y. Shubina.	Vladivostok : DV Medicine, 2021. - 156 c. - ELS "BookUp"	Unlimited access

Online resources

1. Electronic library system "Student Consultant" http://studmedlib.ru/
2. Electronic library system "University Library Online"http://www.biblioclub.ru/
3. Electronic library system "Urait" https://urait.ru/
4. Electronic library system "BookUp" https://www.books-up.ru/
5. Resources owned by the Library and Information Center of FSBEI HE PSMU of the Ministry of Health of Russia https://tgmu.ru/university/bibliotechno-informacionnyj-centr/resursy-bic/sobstvennye/

Online resources and respective user guides are available on the Library and Information Center website Library and Information Center — PSMU (tgmu.ru)

5.2. Discipline Requirements for Facilities and Resources

Information on the facility and resource availability and requirements of the discipline is available on the Facility and resource availability and requirements. FSBEI HE PSMU of the Ministry of Health of Russia (tgmu.ru)" page of the official website of the university.

5.3. List of Information Technologies, Information and Reference Systems, Licensed and Free Software (Including Domestically-developed Software):

1. PolycomTelepresence M100 Desktop Conferencing Application (Videoconference system)
2. SunRav Software tTester
3. 7-PDF Split & Merge
4. ABBYYFineReader
5. Kaspersky Endpoint Security
6. INDIGO online testing system
7. Microsoft Windows 7
8. Microsoft Office Pro Plus 2013
9. 1C:University
10. GARANT system
11. MOODLE (Modular Object-Oriented Dynamic Learning Environment)

6. ASPECTS OF THE IMPLEMENTATION OF THE DISCIPLINE FOR STUDENTS WITH DISABILITIES AND SPECIAL NEEDS

6.1. Availability of Accessible Environment

For students with disabilities and special needs, if a written application is submitted, lectures and practical classes are carried out taking into account health limitations, individual capabilities and medical status (hereinafter referred to as individual characteristics) of the student. Compliance with the following general requirements is ensured: teaching aids for collective and individual use are provided, required technical assistance is provided by an assistant; buildings and premises where lectures and practical classes are taking place meet accessibility requirements, other arrangements lack of which makes it impossible or difficult to master the discipline are made.

6.2. Ensuring Compliance with General Requirements

When lectures and practical classes are carried out at the written application of the student, the following general requirements are met: lectures and practical classes for students with disabilities and special needs take place at the same location as for students who do not have disabilities, if this does not cause difficulties for students; an assistant (assistants), who provide(s) students with the necessary technical assistance taking into account individual characteristics of the student, is (are) provided; necessary teaching aids are provided, taking into account individual characteristics of the student.

6.3. Availability of the Internal Policies and Procedures of FSBEI HE PSMU of the Ministry of Health of Russia to Students with Disabilities in a Format Accessible to Them.

All internal policies and procedures of FSBEI HE PSMU of the Ministry of Health of Russia concerning the discipline are made available to students with disabilities in a format accessible to them.

6.4. Increase in the Time Limit of Interim Assessment for Students with Disabilities and Special Needs in Relation to the Established duration

Format of the interim assessment of academic performance within the scope of the discipline conducted for students with disabilities and special needs is selected taking into account individual characteristics of the students (orally, by writing on paper, by typing on a computer, as a test, etc.). The duration of the interim assessment in relation to the established duration is increased at the written application of the student with disabilities. Time limit for the student's preparation for the test is increased by at least 0.5 hours.

7. STAFFING REQUIREMENTS OF THE DISCIPLINE

Academic teaching personnel that ensure the implementation of the discipline education process meet the requirements of the Federal State Educational Standard of Higher Education for the **31.05.03 Dentistry for international students (in English)**specialty; list of the aforementioned personnel is available on the website of the educational organization.

8. TUTORIAL WORK

Type of tutorial work	Forms and approaches to tutorial work
Assistance in personal growth	Overt Problem-centric debates, workshops, Olympiads, professional events (volunteers, organizers, administrators) Participation in subject and interdisciplinary Olympiads, practical skills competitions, applied science conferences and symposia Talks and problem-centric debates on topics of ethics and deontology in interactions with different categories of participants of professional activity
	Covert – creating atmosphere and infrastructure. Developing a culture of healthy lifestyle and cultivating skills aimed at preserving and improving health. Motivating students to participate in professional, research, administrative, and other kinds of professional activity. Creating atmosphere of kindness and respect with a high level of communication during

	implementation of the discipline.
Civic position and values	Overt Conducting events that facilitate development of civil culture (roundtable discussions, discussions/debates, and talks).
	Covert – focusing on civic values-oriented position and legal awareness Development of mindful civic position during professional activity Cultivating socially-relevant characteristics and personal experience of community work.
Social values	Overt Highlighting aspects of organization of healthy lifestyle based on health-preserving technologies. Highlighting ecology-related questions, environmental issues as a factor affecting population health and select population risks.
	Covert Development of environmental awareness and sustainable ecological behavior.