Документ подписан простой электронной подписью
Информация о владельце:
ФИО: Стегний Кирилл Владимирович
Должность: И.о. ректора
Дата подписания: 02.07.2026 11:40:47
Уникальный программный ключ:
d59234ba928aea5c04c54eb9013e367220b6b2ae

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.В.ДВ.04.01 Pharmacology and drug control in sports

(name of discipline)

Specialty	**31.05.01 General Medicine for international students (in English)** (code, name)
Degree	Specialist's degree
Profile	02 "Healthcare" (in the field of providing primary health care to the population in medical organizations: polyclinics, outpatient clinics, inpatient/outpatient facilities of the municipal health care system)
Mode of study	Full-time
Period of mastering the BEP	**6 years** (nominal length of study)
Department	of Pharmacology and Clinical Pharmacology

Vladivostok, 2025

Program of the discipline **Б1.В.ДВ.04.01 Pharmacology and drug control in sports** is based on:
1) Federal State Educational Standard of Higher Education for the specialty approved by the Order No. 988 of Ministry of Science and Higher Education of the Russian Federation
dated August 12, 2020.

2) Curriculum for the 31.05.01 General Medicine for international students (in English), profile 02 "Healthcare" (in the field of providing primary health care to the population in medical organizations: polyclinics, outpatient clinics, inpatient/outpatient facilities of the municipal health care system), 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 Pharmacology and Clinical Pharmacology of the FSBEI HE PSMU of the Ministry of Health of Russia, under the guidance of the head of the department, Doctor of Medical Sciences, professor Eliseeva E.V.

Developed by:

Head of the Department	Doctor of Medical Sciences, Professor	Eliseeva E.V.
(position held)	(academic degree, academic title)	(full name)
Assistant professor	Candidate of Medical Sciences	Tyrtyshnikova A.V.
(position held)	(academic degree, academic title)	(full name)

1. GENERAL PROVISIONS

1.1. Purpose and Objectives of Mastering Б1.В.ДВ.04.01 Pharmacology and drug control in sports

The purpose of mastering the discipline is developing multidimensional mindset required to predict effect of substances if used in sports medicine, during research of new medications correcting physical abilities of the human body. Pharmacology of sports is necessary to organize pharmacological aid to athletes and rational pharmaceutical treatment in this population group.

Objectives of mastering the discipline:

1. Learn to analyse effect of medications based on the entirety of their pharmacological effects, mechanisms of action, location of action, and pharmacokinetics in athletes;
2. Develop the ability to rationally select and use medications in athletes, including their methods of administration, absorption mechanisms, specifics of binding and distribution, and metabolism in the athletes' body based on the ideas of their properties;
3. Develop the ability to assess efficacy and safety of pharmaceutical treatment in athletes;
4. Master skills necessary to fulfill select scientific research and applied objectives within the framework of pharmacology in sports, taking into account ethical and deontological aspects, as well as main information security requirements.

2. DISCIPLINE AS PART OF THE BASIC EDUCATIONAL PROGRAM

Discipline **Б1.В.ДВ.04.01 Pharmacology and drug control in sports** is included in the Part developed by the parties of educational process of the Unit 1 of the basic educational program for the specialty 31.05.01 General Medicine for international students (in English), profile 02 "Healthcare" (in the field of providing primary health care to the population in medical organizations: polyclinics, outpatient clinics, inpatient/outpatient facilities of the municipal health care system), and is part of the 12th semester's curriculum

3. PLANNED LEARNING OUTCOMES OF THE DISCIPLINE

3.1. Mastering the discipline **Б1.В.ДВ.04.01 Pharmacology and drug control in sports** is aimed at the development of students' competencies. The discipline facilitates the development of students' competencies corresponding to the types of professional activity.

Name of competency category (group)	**Code and Name of competency of the graduate**	**Competency Indicators**
General Professional Competencies		
Etiology and pathogenesis	GPC-5. 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-5_1- assesses the morphofunctional state based on the acquired knowledge CI.GPC-5_2- distinguishes between pathological and physiological processes, identifies etiology of changes CI.GPC-5_3- provides diagnostic assessment of the identified changes

3.2. Types of professional activity corresponding to competencies developed over the course of mastering **Б1.В.ДВ.04.01 Pharmacology and drug control in sports**:

Types of professional activity objectives

1. Medical

Kinds of professional activity objectives

1. Treatment

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**
			12
			hours
1		2	3
Classroom hours (total), including:		**46**	**46**
Lectures (L)		14	14
Practical classes (C)		32	32
Independent work of the student (IW), including:		**26**	**26**
Preparing for classes (CP)		13	13
Preparing for continuous assessment (CAP)		13	13
Type of interim assessment	pass/fail test (T)	T	T
	exam (E)		
TOTAL: TOTAL credit value	hrs.	**72**	**72**
	credits	**2**	**2**

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. 12	
1.	Introduction. Doping in sports. Definition of "doping". Brief history overview. World Anti-Doping Code. Version 3.0	2
2.	List of prohibited substances and methods. Prohibited classes of substances: stimulants and anabolic hormones	2
3.	Prohibited substances: narcotics, diuretics, peptide and glycoprotein hormones and their analogs	2
4.	Prohibited methods. Blood doping. Infusion of artificial oxygen carriers or plasma substitutes. Pharmaceutical, chemical, and physiological procedures	2
5.	Restricted classes of substances: alcohol, cannabinoids, topical anesthetics, glucocorticoids, beta-blockers, antiestrogenic agents	2
6.	Doping control	2
7.	Medications approved for use in athletes	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. 12	
1	Definition of "doping". Criteria for prohibition of a substance in sports. World Anti-Doping Code. Version 3.0 Practical skills training: basics of toxicology of medications. Emergency medical aid	4
2	Pharmacological characteristics of stimulants and anabolic hormones	4
3	Pharmacological characteristics of prohibited substances: narcotics, diuretics, peptide and glycoprotein hormones and their analogs	6
4	Prohibited methods	6
5	Pharmacological characteristics of restricted substances	6
6	Doping control. Pre- and post-competition doping control. Indication methods. Sanctions for doping use outlined in the WADA Code	6
	Hours per semester total	**32**

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. 12		
1	Doping in sports	1. Preparing for practical classes, writing a report on the results of independent work 2. Working with educational materials 3. Working with a case study 4. Preparing for continuous	6

		assessment 5. Preparing a library-research paper	
2	Pharmacological characteristics of substances	1. Preparing for practical classes, writing a report on the results of independent work 2. Working with educational materials 3. Working with a case study 4. Preparing for continuous assessment 5. Preparing a library-research paper	8
3	Prohibited methods	1. Preparing for practical classes, writing a report on the results of independent work 2. Working with educational materials 3. Working with a case study 4. Preparing for continuous assessment 5. Preparing a library-research paper	6
4	Doping control	1. Preparing for practical classes, writing a report on the results of independent work 2. Working with educational materials 3. Working with a case study 4. Preparing for continuous assessment 5. Preparing a library-research paper	6
	Hours per semester total		**26**

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	Sports medicine : studies. the manual [Electronic resource]	E. Yu. Andrianova	M.: Издательство Юрайт, 2024. - 341 с. URL: https://www.urait.ru/	Unlimited access
2	Pharmacology in the practice of sports [Electronic resource]	O. S. Kulinenkov	M.: Sport, 2024. - 256 с. URL: http://www.studentlibrary.ru	Unlimited access
3	Anti-doping policy in sports: textbook [Electronic resource]	A.B. Miroshnikov, A.V. Smolensky, A.V. Shevtsov	M.: Sport, 2024. - 354 с. URL: http://www.studentlibrary.ru	Unlimited access
4	Guidelines on anti-doping control in sports	A.B. Miroshnikov,	M.: Советский спорт, 2022. - 152 с. URL:	Unlimited access

	for sports doctors, coaches, nutritionists, students of medical and sports universities, athletes [Electronic resource]	A.V. Smolensky, O. I. Belichenko	http://www.studentlibrary.ru	
5	Fundamentals of anti-doping support for sports: textbook. the manual [Electronic resource]	E. N. Bezuglova, E. E. Achkasova	M.: Sport, 2019. - 288 c. URL: http://www.studentlibrary.ru	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	Pharmacology: practical manual [Electronic resourse]	L.V. Kogay, O.E. Vaizova, A.I. Vengerovsky	Томск: Издательство СибГМУ, 2019. - 230 с. - Текст: электронный // ЭБС "Букап" : [сайт]. - URL : https://www.books-up.ru/ru/book/pharmacology-practical-manual-10236726/	Unlimited access
2	Pharmacology : textbook for medical students : translation of 12th edition of Russian textbook "Pharmacology" (2017)	D.A. Kharkevitch. - 2nd ed.	M. : ГЭОТАР-Медиа, 2019.	Unlimited access
3	Pharmacology. Illustrated textbook (Electronic resourse)	Alyautdin R.N.	Москва : ГЭОТАР-Медиа, 2020. - 312 с. - ISBN 978-5-9704-5665-1. - Текст : электронный // ЭБС "Консультант студента" : [сайт]. - URL : https://www.studentlibrary.ru/book/ISBN9785970456651.html	Unlimited access
4	Kharkevitch D. A. Pharmacology : textbook	D.A. Kharkevitch	M. : ГЭОТАР-Медиа, 2023. - 12nd edition. - 680 с. - ЭБС «Консультант студента»	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/

Additional online resources:

1. International Olympic Committee http://www.olympic.org
2. World Anti-Doping Agency (WADA) http://www.wada
3. http://www.minsport.gov.ru

4. http://olympic.ru
5. http://www.anti-doping.ru/publications/rekomendacii-po-organizacii-in/
6. http://www.sports.ru
7. www.rusada.ru

	Resource name	*URL*
1	PubMed	https://pubmed.ncbi.nlm.nih.gov/
2	FDA.Drugs	https://www.fda.gov/drugs

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 31.05.01 General Medicine 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	Assessment criteria
Assistance in personal growth	Overt Talks and problem-centric debates aimed at promotion of healthy lifestyle. Participation in interdepartmental conferences aimed at formation of healthy lifestyle and development of skills necessary to preserve and improve health.	Portfolio
	Covert – creating atmosphere and infrastructure. Developing a culture of healthy lifestyle, the ability to preserve and improve health. 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). Short discussions on current significant events in case the latter occur.	Portfolio
	Covert Focusing on civic values-oriented position and legal awareness. Cultivating mindful social position during professional activity.	
Social values	Overt Highlighting aspects of organization of healthy lifestyle based on	Portfolio

	health-preserving technologies. Highlighting ecology-related questions, environmental issues as a factor affecting population health and select population risks.	
	Covert Identification in social structure during period of education and in professional activity.	