

**National Pirogov Memorial Medical University, Vinnytsya**

**“APPROVE ”**

Vice - Rector for Academic Affairs



prof. of HEI Oksana SEREBRENNIKOVA

“31” 08 2022 year

**“ AGREED ”**

Head of physical education and MPC  
department



prof. of HEI Larisa SARAFINYUK

“31” 08 2022 year

**SYLLABUS  
of academic discipline**

**“SPORTS MEDICINE”**

Specialty	222 Medicine
Educational level	the second (master`s) level
Educational programme	EPP Medicine, 2022
Academic year	2022-2023
Department	physical education and MPC
Lecturer (if lectures are given)	Ass-prof. Lezhneva Olena V.
Contact information	<i>Physical education and MPC Department, fizkult@vnmua.edu.ua , National Pirogov Memorial Medical University, Vinnytsya , Pirogov`s st, 56, (0432)520320</i>
Syllabus compiler	Ass-prof. Lezhneva Olena V.

### 1. Status and structure of the discipline

Discipline status	Compulsory
Discipline code in EPP/discipline place in EPP	EC 43, discipline of professional training
Course / semester	<i>4nd year (VII semester) 4rd year (VIII semester)</i>
The amount of discipline (the total number of hours / number of credits ECTS)	45 hours / 1,5 credits ECTS
Number of content modules	1 modules
The structure of the discipline	Lectures - 6 hours Practical classes 28 hours Independent work 11 hours
Language of study	English
Form of study	Full-time ( <i>or remote full-time by order</i> )

### 2. Description of the discipline

**Short annotation of the course, relevance.** The study of the discipline "Sports Medicine" provides a scientific basis for morpho-functional selection for a particular sport in accordance with the genotypic and phenotypic characteristics of the individual; ensuring high-quality in-depth dispensary examination, including admission to competitions based on health assessment; introduction of modern diagnostic methods in the system of medical monitoring of athletes; improving the level and quality of medical care by creating a unified program of medical care for highly qualified athletes at all levels of sports, including training and competition; creation of a single standard system for collecting and analyzing the results of the survey of athletes in compliance with the principle of confidentiality; prevention and treatment of diseases and injuries of athletes in the course of their professional activity; development of modern methods of early diagnosis and treatment of overexertion; control over the functional state and its correction in athletes in the conditions of the chosen sports activity; introduction of modern research methods in specialized activities of athletes, which allow to quantify the functional capabilities of the body; determining the mechanism of action of pedagogical, psychological and methodological and biological means of recovery and stimulation of physical performance; control over the use of drugs in sports.

**Prerequisites.** To successfully master the discipline the student needs knowledge gained in the study of the following disciplines of general training: anatomy, medical biology, medical chemistry, medical and biological physics, physiology, pathophysiology, hygiene and ecology, pharmacology, propaedeutics of internal medicine, propaedeutics of pediatrics.

**The purpose of the course and its significance for professional activities.** The purpose of the discipline is to teach students to conduct medical examinations of persons of different ages for admission to physical culture and sports and evaluate their effectiveness; to teach methods of medical and pedagogical observations during training; acquisition by students of knowledge about the most effective means of physical culture and other physical factors for maintaining health and the use of means of recovery and stimulation in sports training..

**Postrequisites.** In the process of studying the discipline acquires the knowledge necessary for successful mastering of disciplines, namely: internal medicine, surgery, traumatology and orthopedics, neurology, pediatrics, obstetrics and gynecology and other clinical disciplines, which involves the integration of teaching with these disciplines and the application of acquired knowledge of sports medicine in the process of further education and professional activities.

**3. Learning outcomes. After successful study of the discipline the applicant will be able to:**

After successful study of the discipline the applicant will be able to:

1. have a method of comprehensive medical examination of persons engaged in physical exercises;
2. analyze the data of a comprehensive medical examination to determine the physical development, functional abilities and health status of the examined persons;
3. make a medical opinion based on the results of the examination, decide on admission to sports and physical culture, make a division into medical groups;
4. identify external signs of varying degrees of fatigue when exercising;
5. diagnose acute and chronic physical exertion, as well as other diseases and injuries arising from inadequate physical activity;
6. have methods of emergency care and treatment of acute and chronic physical exertion
7. identify the main differences and features of the use of pedagogical, psychological and medical-biological means of recovery and identify signs of doping in athletes.

#### 4. Content and logistic of the discipline

Module 1 Sports Medicine	VII or VIII semester 45 hours / 1.5 credits	Lectures №№ 1-3 Practical classes №№ 1-10 Topics for self-study №№ 1-4
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The course includes 9 topics.

##### **Module 1. Sports Medicine**

**Topic 1.** Main tasks and content of medical control. Modern methods of examination of athletes and sportsmen. Methods of complex medical examination. Estimation and evaluation of physical development of human.

**Topic 2.** Research and estimation of the functional state cardiovascular, respiratory and vegetative nervous system by functional tests.

**Topic 3.** Classification of samples with physical activity. Types of cardiovascular response to exercise.

**Topic 4.** Estimation and evaluation general physical capacity and aerobic productivity. Tolerance to the physical loadings.

**Topic 5.** Quantitative estimation of physical health of man level. Determination of human biological age.

**Topic 6.** Medical conclusion. Make up of the individual athletic-health modes.

**Topic 7.** Checking of medical control cards.

**Topic 8.** Prepathological condition and diseases during irrational engaging by a physical culture and sport. Sudden death in sports.

**Topic 9.** Methods of recovering and stimulation at the health and sports training.

**Topic 10.** Concept about stimulants.

Types of education according to the curriculum are: a) lectures, b) practical classes, c) independent work of students.

The topics of the lecture course reveal the problematic issues of the relevant sections of sports medicine.

Practical classes provide a theoretical justification of the main issues of the topic and the acquisition of the following practical skills:

1. Know about sports medicine, understand its purpose and main tasks.
2. Master the methods of comprehensive medical examination, including research and assessment of physical development, functional abilities of the body and human health.
3. Analyze the survey data and form a medical opinion, decide on admission to sports, make a division into medical groups.
4. To give recommendations on the choice of the most optimal type of physical exercises, recreational and health and training motor modes depending on the physical condition.

5. Detect external signs of varying degrees of fatigue when exercising.
6. Know the causes of pre-pathological and pathological conditions, as well as risk factors for sudden death in irrational physical activity and sports.
7. To give recommendations on medical-biological and other means of prevention of fatigue and restoration of physical working capacity at improving and sports training.

In practical classes, students conduct functional tests and tests, fill out a medical control card and formulate conclusions to the performed functional tests.

Independent work of the student involves preparation for practical classes and development of practical skills, study of topics for independent extracurricular work.

The control of mastering the topics of independent extracurricular work is carried out by the final control of the discipline. Thematic plans of lectures, calendar plans of practical classes, thematic plan of independent extracurricular work, volume and directions of individual work are published on the site of the department.

The route for obtaining materials: [Physical training](#) department / for students / Full-time education / medicine / 4 course / Educational materials / or through the link <https://www.vnmdu.edu.ua/> [Physical training](#) department #. Access to the materials is carried out through the student's corporate account [s000XXX@vnmdu.edu.ua](mailto:s000XXX@vnmdu.edu.ua).

## 5. Forms and methods of monitoring academic performance

Current control in practical studies	Methods: oral or written questioning, solving situational problems, conducting functional tests, their interpretation and evaluation of their results (registration of a medical control card)
Final control of the discipline - differential credit	Methods: testing, oral questioning (according to the Regulation of the Academic process in National Pirogov Memorial Medical University, Vinnytsya (link <a href="https://www.vnmdu.edu.ua/General">https://www.vnmdu.edu.ua/General</a> information))
Learning success diagnostic tools	Theoretical questions, tests, clinically-oriented situational tasks, practical tasks, practical skills demonstration

## 6. Assessment criteria

Knowledge assessment is carried out in accordance with the Regulations of the Academic process in National Pirogov Memorial Medical University, Vinnytsya (link <https://www.vnmdu.edu.ua/General> information)

Continuous assessment	On a four point system of traditional assessments: 5 «excellent», 4 «good», 3 «satisfactory», 2 «unsatisfactory»
Midpoint separation assessment	On a four-point system of traditional assessments
Control of practical skills	According to the four-point system of traditional assessments
Final control of the discipline	<i>Sum of points for pre-examination testing (15-40 points) and oral questioning(theoretical question and situational problem) (0-40 points))</i> Final exam grade: 71-80 points - "excellent" 61-70 points - "good" 50-60 points - "satisfactory" Less than 50 points - "unsatisfactory" / did not pass

Discipline assessments:	Current academic assessment - from 72 to 120 points (conversion of the average traditional assessment of practical class on a 120-point scale): 60% of the grade for the discipline Final control - from 50 to 80 points: 40% of the grade for the discipline Individual work - from 1 to 12 points From 122 to 200 points in total.
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### Discipline Score Scale: National and ECTS

The sum of grades for all types of educational activities	Score ECTS	Score on a national scale	
		For exam, course project (work), practice	for credit test
180-200	<b>A</b>	excellent	credited
170-179,9	<b>B</b>	good	
160-169,9	<b>C</b>		
141-159,9	<b>D</b>	satisfactory	
122-140,99	<b>E</b>	satisfactory	-
120-140,99	<b>E</b>	-	credited
119-61	<b>FX</b>	unsatisfactory with the possibility of reassembly	is not credited with the possibility of reassembling
1-60	<b>F</b>	unsatisfactory with a mandatory reexamination of discipline	is not credited with mandatory reexamination of discipline

### Criteria for student knowledge assessment

#### Assessment of oral answer during the current assessment

**The grade "excellent"** is given to the student who showed versatile and deep knowledge of the topic of practical training, is able to successfully perform practical tasks provided by the program, realized the relationship of individual sections of the discipline, their importance for future professions, creative abilities in understanding and using learning. program material, showed the ability to independently update and replenish knowledge.

**The grade "good"** is given to a student who has shown full knowledge of the topic of practical training, successfully performs the practical tasks provided by the program, is able to independently master the thematic plan.

**The grade "satisfactory"** is given to the student who has shown knowledge of the main topic of practical training in the amount necessary for further study, copes with the practical tasks provided by the program, but has the necessary knowledge to overcome mistakes.

**The grade "unsatisfactory"** is given to a student who did not show sufficient knowledge of the topic of practical training, made fundamental mistakes in performing the practical tasks provided by the program, can not use the knowledge without further assistance of the teacher, failed to master independent skills.

#### **Assessment of practical skills during the current assessment**

**The grade "excellent"** is given to a student who knows the course, sequence of examination and determination of the functional state of the body of the athlete and athlete, demonstrates the correct implementation of the necessary practical skills and correctly with clear formulations of generalizations and conclusions draws up a medical control card.

**A grade of "good"** is given to a student who admits inaccuracies in the examination and determination of the functional state of the body of the athlete and athlete, but is able to identify errors and can demonstrate practical skills in general, draws up a medical control card.

**The grade "satisfactory"** is given to a student who knows the basics of the practical task, but has difficulty in examining and determining the functional state of the body of an athlete and athlete, can not demonstrate the correct sequence of practical skills, can not fully interpret the results of research, sloppily -control card.

**The grade "unsatisfactory"** is given to a student who cannot demonstrate practical skills, has significant difficulties in examining and determining the functional state of the body of an athlete and athlete, violates the procedure of practical work, does not register the progress of work in the control card.

#### **Assessment of the oral answer (theoretical question and situational problem) during the final control (differential credit))**

**The grade "excellent"** is given to the student who competently and in a logical sequence provides answers to questions. During the answer demonstrates the ability to analyze theoretical material, makes thorough conclusions about the importance of theoretical material for practical medicine, provides clear correct answers to additional non-standard questions.

**The grade "good"** is given to a student who has a good command of theoretical material and provides answers to questions in a logical sequence, but admits minor inaccuracies, which are quickly corrected when answering clarifying questions of the teacher.

**The grade "satisfactory"** is given to the student who at the answer to a question demonstrates only basic knowledge of a theoretical material, admits considerable inaccuracies or has difficulties at the answer to clarifying questions of the teacher.

**The grade "unsatisfactory"** is given to the student who does not know the answer to the question, makes gross mistakes when answering clarifying questions, does not have basic knowledge of theoretical material.

The calculation of individual points is carried out on the basis of the Regulation of the Academic process in National Pirogov Memorial Medical University, Vinnytsya (link <https://www.vnmu.edu.ua/General> information).

- 12 points - prizes at interuniversity scientific conferences with printed work;
- 11-10 points - prizes at intra-university scientific conferences with the presence of printed work;
- 10 points - participation in intra-university scientific conferences without a prize, with the presence of printed work;
- 8 points - participation in intra-university conferences with printed work without a prize;
- 6 points - making tables.

### **Policy of discipline / course**

The student has the right to receive high-quality educational services, access to contemporary scientific and educational information, qualified tutoring during the study of discipline and mastering practical skills. The policy of the department during the providing of educational services is a student-centered, based on normative documents of the Ministry of Education and the Ministry of Health of Ukraine, the Statute of the University and the Procedure for the Providing of Educational Services regulated by the main principles of the organization of the educational process in National Pirogov Memorial Medical University, Vinnytsya and the principles of academic integrity ( link <https://www.vnmu.edu.ua/General> information).

### **Adherence to the rules of National Pirogov Memorial Medical University, Vinnytsya, safety techniques in practical classes.**

#### **Requirements for preparation for practical classes.**

The student should be prepared for a practical lesson, the relevant sections in the control card for the current topic should be filled in, if necessary, held at home with the results recorded in the card.

A student should come to class on time, without delay. A student who is more than 5 minutes late is not allowed to the practical class and must work it in the prescribed manner.

In practical classes, the student must be dressed in a work uniform (medical gown). Students who do not have a work uniform are not allowed to practice.

The student must follow the rules of safety in practical rooms and at the department.

When discussing theoretical issues, students should demonstrate tolerance, courtesy and respect for their colleagues and the teacher; when performing practical tasks, the workplace should be kept in order and be cleaned after performing practical work.

**Usage of mobile phones and other electronic devices.** The use of mobile phones and other electronic devices in the classroom is allowed only during practical tasks..

**Academic integrity.** When studying the discipline, the student must be guided by the Code of Academic Integrity and Corporate Ethics of National Pirogov Memorial Medical University, Vinnytsya (link : <https://www.vnmu.edu.ua/General> information)/ Code of Academic Integrity).. In case of violation of the norms of academic integrity during the current and final controls student receives a grade of "2" and must work it out to his teacher in the prescribed manner within two weeks after receiving an unsatisfactory assessment).

**Missed classes.** Missed classes are working out in the manner prescribed by Regulations of the Academic process in National Pirogov Memorial Medical University, Vinnytsya (link <https://www.vnmu.edu.ua/General> information) at the time of work out schedule (published on the website of the department <https://www.vnmu.edu.ua/> Department of [Physical training](#)) to the teacher on duty. To work out missed lesson student must answer questions in writing or orally to the topic of the lesson. The reworking of missed lectures is carried out after providing a thesis of lecture material, or writing an abstract, or preparing own presentation on the topic of missed lecture.

**The procedure for admission to the discipline final control** is given in the Regulation of the Academic process in National Pirogov Memorial Medical University, Vinnytsya (link <https://www.vnmu.edu.ua/General> information). Students who do not have missed practical classes and lectures, who have passed medical control cards are allowed and received an average traditional grade of at least "3" are allowed to final control.

**Additional points.** Individual points in the discipline that student can receive for individual work, is determined by the results of his individual work according to Regulation of the Academic process in National Pirogov Memorial Medical University, Vinnytsya (link <https://www.vnmu.edu.ua/General> information) and policy of the course.

**Conflict resolution.** In case of misunderstandings and complaints to the teacher because of the quality of educational services, knowledge assessment and other conflict situations, student should submit his / her claims to the teacher. If the issue is not resolved, the student has a right to apply to the head of the department according to Complaints Consideration Procedure (<https://www.vnmnu.edu.ua/> General information / Basic documents).

**Politics in terms of remote learning.** Distance learning regulated by the Regulations of the elements of remote learning in National Pirogov Memorial Medical University, Vinnytsya (<https://www.vnmnu.edu.ua/> General information). The main training platforms for studying are Microsoft Team and Google Meets. Practical classes and lectures, exercises and consultations during distance learning is published on the website of the department (<https://www.vnmnu.edu.ua/> Department of [Physical training](#)/ Student or <https://www.vnmnu.edu.ua/Department of Physical training/ News>).

Feedback from teachers is via messengers (Viber, Telegram, WhatsApp) or e-mail (at the teacher's choice) during working hours.

### **Educational resources.**

Educational and methodological support of the discipline is published on the website of the department (<https://www.vnmnu.edu.ua/> Department of [Physical training](#)/ To students). Consultations are hold twice a week according to the schedule.

### **Recommended reading:**

1. Diagnosis and prevention of diseases and injuries that occur as a result of irrational sports / Mykhalyuk Y.S., Syvolok V.V.. – Zaporizhzhia, 2022. – 200 p.
2. Foundations of the physical rehabilitation in medicine / Anatoliy Mahlovanyy, Olha Kuninets, Igor Grygus //Physical therapy, health, physical culture and pedagogy: monograph. Fizjoterapia, zdrowie, kultura fizyczna i pedagogika: monografia. – Rivne: NUVHP, 2021. – P. 147 – 175
3. Basics of rehabilitation, physical therapy, occupational therapy: tutorial. for students of the 1st level of universities. education: branch of knowledge 22 "Health care", special. 227 "Physical therapy, occupational therapy" / by general ed.: L.O. Vakulenko, V.V. Klapchuka. - Ternopil: TDMU "Ukrmedknyga", 2020. - 372 p.
4. Liannoi Yu. O. Fundamentals of physical rehabilitation: teaching. manual for university students education closing / Yu. O. Liannoi; ed. Yu. O. Liannai. - Sumy: Type of Sumy. DPU named after A. S. Makarenko, 2020. - 368 p.
5. Sports medicine: tutorial. for students of higher of education / Larisa Yan-Henrikhovna Shakhlina, Boris Hryhorovych Kogan, Tetyana Oleksandrivna Tereshchenko, Volodymyr Petrovych Tyshchenko, Serhii Mykhailovych Futorniy; under the editorship Larisa Yan-Henrikhovna Shakhlina. - Kyiv: National. University of Physics education and sports of Ukraine: Olympic Literature, 2018. – 422, [1] p.
7. Mykhalyuk E. L. Current issues of sports medicine. Part 1: monograph / Evgeny Leonidovych Mykhalyuk. – Odesa: Kuprienko Sergey Vasyliovych; Zaporozhye: [B. v.], 2017. – 158 p.
8. David X. Cifu. Braddom's Physical Medicine and Rehabilitation. - Commonwealth University School of Medicine, Richmond, Virginia, 2017. – 1184 p.

### **Electronic resources:**

1. International Association of Sport International – IASI [Elektronic resourse]. –. – Access mode: [www.iasi.org/home.html](http://www.iasi.org/home.html)
2. <https://www.biomedcentral.com/>
3. <http://search.ebscohost.com/>

**The timetable and distribution of groups** with assigned teachers are published on the web page of the department ((<https://www.vnmnu.edu.ua/> / Department of [Physical training](#)/ To



students).

**Questions to the intermediate and final semester control (credit) of the discipline** are published on the web page of the department (<https://www.vnmua.edu.ua/> Department of **Physical training/** To students).

The syllabus of the discipline «sports medicine» was discussed and approved at the meeting of the department physical education and MPC department (record № 1, dated "27" August 2020)

Responsible for the academic  
discipline |” Sports medicine”



(signature)

Ass-prof. Lezhneva Olena V.

Head of the department



physical education and MPC

(signature)

Prof. Sarafynyuk Larisa A.