

DANYLO HALYCKY LVIV NATIONAL MEDICAL  
UNIVERSITY

Department of Physical Training and Sports Medicine



APPROVED

First vice-rector on scientific and  
pedagogical work D.Halycky LNMU  
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*Iryna Solonyenko*  
"13" 06 2023

**PROGRAM OF EDUCATIONAL DISCIPLINE**  
**Physical Rehabilitation and Sports Medicine**

**EC 30.2**

**Training of specialists of the second (master's) level of higher education in the  
field of knowledge 22 "Health care"  
speciality 222 "Medicine"**

Discussed and approved  
on meeting of department  
physical training and sports medicine

Protocol № 18  
from "16" Травня 2023  
Head of the department commission  
as. prof. Olha KUNYNETS *Olha Kunynets*

Approved  
profiled methodical commission  
on humanities

Protocol № 2  
from "18" Травня 2023  
Head of the methodical commission  
prof. Ihor DERZKO *Ihor Derzko*

**PROGRAM DEVELOPERS** : c.m.s., as.prof. Mahlovana H.M., as. Marusiak S.V. under the general editorship of the head of the department of physical education and sports medicine c.b.s., as.prof. Kunynets O.B.

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## **General section                      Working studying program of discipline**

**EC 30.2 "Physical rehabilitation and sports medicine"** prepared in accordance with the Standart of higher education in Ukraine (next- Standart) **second (master's degree)**.

Branch of knowledge **22 "Health Care"**

Speciality **222 "Medicine"**

Educational program **Master of medicine**

Practical training in sports medicine sections are held on the basis of specialized training rooms and laboratories specialized departments in the offices of sports medicine university or medical and sports clinic. Practical exercises in physical rehabilitation appropriate to clinical sites, as well as in the offices of exercise, patients demonstrating relevant to the practical exercises, analysis of their clinical condition and receive the appropriate physical rehabilitation. The number of students in the training group should not exceed 5-10 persons.

While teaching physical rehabilitation and sports medicine may be amendments to the curriculum in the range up to 15%, depending on the organizational and technical capacity of relevant departments (courses), but in general should be made of the claims of discipline in accordance with the ultimate goals of EQC and OPP for specialty training and a curriculum.

Assimilation themes and content modules controlled by practical exercises. We recommend using these features, determine the level of preparation of students: tests, individual and class oral examination, solving situational problems. Also, the teacher tested and evaluated performance of independent work and individual tasks.

To test lecturers drug-control card (form number 061 / O) cards and patient being treated in the office or department of exercise or in rehab (Form number 42 / o), which equated to check history, given 0.5 hours for each student.

Final control module is carried out after completion. Assessment of students with discipline is rating, exhibited by multi-scale and a determination by the ECTS system and the traditional scale adopted in Ukraine.

At the current stage, the discipline "Physical rehabilitation and sports medicine" is gaining more and more importance for the high-quality comprehensive training of future doctors. Especially on issues related to the use of physical culture and physical rehabilitation for quick recovery of health, preservation of quality of life and prevention or elimination of various complications in patients. The WHO expert committee determined that the goal of rehabilitation is to prevent disability during treatment of diseases and help the patient achieve the maximum physical, mental, professional, social and economic fulfillment that he is capable of within the limits of the existing disease.

The early, timely appointment of physical rehabilitation is very important, especially in diseases of the cardiovascular, respiratory, digestive, endocrine, and nervous systems, as well as after injuries, surgical interventions, in pediatrics, obstetrics, and gynecology. Particular attention should be paid to the appointment of special physical exercises during conservative treatment, as well as at the stages of pre- and postoperative intervention, which are selectively combined with general strengthening and breathing exercises, hardening agents and preformed physical factors, taking into account: the clinical course of the disease (phase, stage, degree of functional disorders), accompanying pathology, as well as taking into account the individual characteristics of the body (age, sex, functional abilities of the main life support systems, level of physical fitness and tolerance to physical exertion, state of protective systems) at various stages of physical rehabilitation; Equally important is the use of means of physical education and rehabilitation for the prevention or functional treatment of diseases, this especially applies to posture disorders, scoliosis, osteochondrosis of the spine, varicose veins of the lower extremities, diseases of the circulatory system, respiratory organs and other pathologies. Therefore, high-quality training of a doctor is impossible without perfect mastery of the basics of physical rehabilitation and sports medicine.

**Description of the curriculum on discipline  
"Physical rehabilitation and sports medicine" for students of the Medical Faculty**

Structure of the discipline	Number of credit hours, including:			Academic year Semester	View control	
	Total hours	Auditorium				ISW
		Lectures	Practical lessons	4 year study		
<b>Module Physical Rehabilitation and Sports Medicine</b>	<b>2.5 credits ECTS / 75 hours</b>	<b>8</b>	<b>30</b>	<b>37</b>	<b>Fourth year of studies (VII-VIII semester)</b>	<b>Passed</b>

**1. PURPOSE AND OBJECTIVES OF THE STUDY FINAL TRAINING COURSE**

**1.1. The main purpose** of discipline is to develop in students a holistic understanding of the possibilities, forms and methods of medical control in the health and sports training, as well as during physical rehabilitation, understanding the importance of timely application of physical culture for disease prevention, as well as in complex restorative treatment various profiles.

**1.2. Final aim of the study discipline**

1. Analyze and predict the effect of physical activity on the body of persons engaged in physical exercise according to medical control and prescribe appropriate rehabilitation measures for the recovery period.
2. Plan and implement physical rehabilitation in complex restorative treatment in inpatient, outpatient and health stages in diseases, injuries, damage and after surgery, as well as in obstetric practice and pediatrics.
3. Choose and apply physical rehabilitation methods in the complex treatment of patients of various profiles for faster recovery of health, preservation of quality of life and prevention or elimination of the consequences of the pathological process.
4. Be able to evaluate the effectiveness of physical rehabilitation.

**Interdisciplinary connections:** Physical rehabilitation and sports medicine as an educational discipline is based on the study by students of human anatomy and physiology, medical biology, biological chemistry, propaedeutics of internal medicine, a number of specialized disciplines, such as therapy, surgery, traumatology, pediatrics, physical education that integrates with these disciplines; lays the foundations for normalization of physical activity in the complex treatment of diseases, prevention of their exacerbations and complications, restoration of the proper quality of life of a sick person, improvement of the standard of living and prevention of functional impairment in the process of vital activity; ensures the introduction of modern diagnostic methods into the system of medical monitoring of athletes, the development of modern methods of early diagnosis and treatment of overstrain; control over the functional state of athletes in the conditions of the chosen sports activity, which involves the integration of teaching with these disciplines and the formation of skills to apply knowledge of physical rehabilitation and sports medicine in the process of further education and in professional activities.

**1.3. Competences and learning outcomes**, the formation of which is facilitated by the discipline (relationship with the normative content of training of higher education, formulated in terms of learning outcomes in the Standard).

In accordance with the requirements of the standard, the discipline provides students with the acquisition of **competencies**:

- *integral*: The ability to solve complex problems, including those of a research and innovation nature in the field of medicine. Ability to continue learning with a high degree of autonomy.

**- *General competences of the specialty (GC):***

- GC 1. Ability to abstract thinking, analysis and synthesis.
- GC 2. The ability to learn and master modern knowledge.
- GC 3. Ability to apply knowledge in practical situations.
- GC 4. Knowledge and understanding of the subject field and understanding of professional activity.
- GC 5. Ability to adapt and act in a new situation.
- GC 6. Ability to make informed decisions.
- GC 7. Ability to work in a team.
- GC 8. Ability to interpersonal interaction.
- GC 10. Ability to use information and communication technologies.
- GC 11. Ability to search, process and analyze information from various sources.
- GC 12. Determination and persistence in relation to assigned tasks and assumed responsibilities.
- GC 13. Awareness of equal opportunities and gender issues.
- GC 14. The ability to realize one's rights and responsibilities as a member of society, to realize values of civil (free democratic) society and its necessity sustainable development, the rule of law, human and citizen rights and freedoms in Ukraine.
- GC 15. The ability to preserve and multiply moral, cultural, scientific values and achievements society based on an understanding of the history and patterns of development of the subject area, its place in the general system of knowledge about nature and society and in the development of society, techniques and technologies, use different types and forms of motor activity for active recreation and leading a healthy lifestyle.

**- *professional competences of the specialty (PC):***

- PC 1. Ability to collect medical information about the patient and analyze clinical data.
- PC 2. Ability to determine the necessary list of laboratory and instrumental studies and evaluate their results.
- PC 3. Ability to establish a preliminary and clinical diagnosis of the disease.
- PC 4. The ability to determine the necessary regime of work and rest during treatment and disease prevention.
- PC 5. Ability to determine the nature of nutrition during treatment and prevention diseases.
- PC 6. Ability to determine the principles and nature of treatment and prevention diseases.
- PC 7. Ability to diagnose emergency conditions.
- PC 8. Ability to determine tactics and provide emergency medical assistance.
- PC 9. Ability to carry out medical evacuation measures.
- PC 10. Ability to perform medical manipulations.
- PC 11. Ability to solve medical problems in new or unfamiliar environments the presence of incomplete or limited information, taking into account the aspects of social and ethical responsibility.
- PC 15. Ability to carry out a work capacity examination.
- PC 16. Ability to maintain medical documentation, including electronic forms.
- PC 21. Clearly and unambiguously communicate own knowledge, conclusions and arguments about problems health care and related issues to specialists and non-specialists, in particular to persons who are studying.
- PC 24. Compliance with ethical principles when working with patients and laboratory animals.
- PC 25. Observance of professional and academic integrity, be responsible for reliability of the obtained scientific results

Detailing of competencies in accordance with the SRC descriptors in the form of the "Competence Matrix".

## Matrix of competences

№	Competence (Classification of competences according to SRC)	Knowledge	Skills	Communications	Autonomy and responsibility
<b>Integral competence</b>					
The ability to solve complex problems, including those of a research and innovation nature in the field of medicine. Ability to continue learning with a high degree of autonomy.					
<b>General competences</b>					
GC1.	Ability to abstract thinking, analysis and synthesis.	Specialized conceptual knowledge that includes current scientific	Specialized skills/problem-solving skills required for conducting	Clear and unambiguous presentation of one's own knowledge,	Managing work or learning processes that are complex, unpredictable and require new

		achievements in the field of professional activity or field of knowledge and is the basis for original thinking and conducting research	research and/or implementing innovative activities to develop new knowledge and procedures	conclusions and arguments to specialists and non-specialists, in particular to people who are studying	strategic approaches
GC 2.	Ability to learn and master modern knowledge	Specialized conceptual knowledge that includes current scientific achievements in the field of professional activity or field of knowledge and is the basis for original thinking and conducting research	Ability to solve problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethical responsibilities	Use of foreign languages in professional activities	Ability to continue learning with a high degree of autonomy
GC 3.	Ability to apply knowledge in practical situations	Specialized conceptual knowledge that includes current scientific achievements in the field of professional activity or field of knowledge and is the basis for original thinking and conducting research	Ability to integrate knowledge and solve complex problems in broad or multidisciplinary contexts	Clear and unambiguous presentation of one's own knowledge, conclusions and arguments to specialists and non-specialists, in particular to people who are studying	Managing work or learning processes that are complex, unpredictable and require new strategic approaches
GC 4.	Knowledge and understanding of the subject field and understanding of professional activity.	Critical understanding of problems in the field and at the border of the fields of knowledge	Ability to integrate knowledge and solve complex problems in broad or multidisciplinary contexts	Use of foreign languages in professional activities	Responsibility for contributing to professional knowledge and practice and/or evaluating the results of team and collective activities
GC 5.	Ability to adapt and act in a new situation.	Critical understanding of problems in the field and at the border of the fields of knowledge	Ability to solve problems in new or unfamiliar environments in the presence of incomplete or limited information,		Responsibility for contributing to professional knowledge and practice and/or evaluating the performance of teams and

			taking into account aspects of social and ethical responsibilities		collectives
GC 6.	Ability to make an informed decision.	Specialized conceptual knowledge that includes current scientific achievements in the field of professional activity or field of knowledge and is the basis for original thinking and conducting research	Ability to solve problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethical responsibilities	Clear and unambiguous communication of one's own knowledge, conclusions and arguments to specialists and non-specialists, in particular to persons studying	Managing work or learning processes that are complex, unpredictable and require new strategic approaches
GC 7.	Ability to work in a team.	Critical thinking of problems in the field and at the boundaries of fields of knowledge	Ability to solve problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethical responsibilities	Clear and unambiguous presentation of one's own knowledge, conclusions and arguments to specialists and non-specialists, in particular to people who are studying	Responsibility for contributing to professional knowledge and practice and/or evaluating the performance of teams and collectives
GC 8.	Interpersonal skills	Specialized conceptual knowledge that includes current scientific developments in the field of professional activity or field of knowledge and is the basis for original thinking and conducting research	Ability to solve problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethical responsibilities	Clear and unambiguous presentation of one's own knowledge, conclusions and arguments to specialists and non-specialists, in particular to people who are studying	Responsibility for contributing to professional knowledge and practice and/or evaluating the performance of teams and collectives
GC10	Ability to use information and communication technologies.	Critical understanding of problems in the field and at the border of the fields of knowledge	Ability to solve problems in new or unfamiliar environments in the presence of incomplete or limited information,	Use of foreign languages in professional activities	Ability to continue education with a high degree of autonomy



			taking into account aspects of social and ethical responsibility		
GC11	Ability to search, process and analyze information from various sources.	Critical thinking about problems within and across disciplines	Ability to integrate knowledge and solve complex problems in broad or multidisciplinary contexts	Use of foreign languages in professional activities	Responsibility for contributing to professional knowledge and practice and/or evaluating the results of team and collective activities
GC12	Determination and persistence in relation to assigned tasks and assumed responsibilities	Critical understanding of problems in the field and at the border of the fields of knowledge. responsibilities	Ability to solve problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethical responsibilities		Ability to continue learning with a high degree of autonomy
GC13	Awareness of equal opportunities and gender issues.	Critical thinking of problems in the field and at the boundaries of the fields of knowledge	Specialized skills/problem-solving skills necessary for conducting research and/or carrying out innovative activities to develop new knowledge and procedures	Clear and unambiguous presentation of one's own knowledge, conclusions and arguments to specialists and non-specialists, in particular to people who are studying	Managing work or learning processes that are complex, unpredictable and require new strategic approaches
GC14	The ability to realize one's rights and responsibilities as a member of society, to realize the values of a civil (free democratic) society and the need for its sustainable development, the rule of law, the rights and free-	Specialized conceptual knowledge that includes current scientific achievements in the field of professional activity or field of knowledge and is the basis for original thinking and conducting research	Ability to integrate knowledge and solve complex problems in broad or multidisciplinary contexts	Clear and unambiguous presentation of one's own knowledge, conclusions and arguments to specialists and non-specialists, in particular to people who are studying	Ability to continue learning with a high degree of autonomy

	doms of a person and a citizen in Ukraine.				
GC15	The ability to preserve and multiply moral, cultural, scientific values and achievements of society based on understanding the history and patterns of development of the subject area, its place in the general system of knowledge about nature and society and in the development of society, technology and technologies, to use various types and forms of motor activity for active recreation and leading a healthy lifestyle.	Specialized conceptual knowledge that includes current scientific achievements in the field of professional activity or field of knowledge and is the basis for original thinking and conducting research	Ability to integrate knowledge and solve complex problems in broad or multidisciplinary contexts	Clear and unambiguous presentation of one's own knowledge, conclusions and arguments to specialists and non-specialists, in particular to people who are studying	Ability to continue learning with a high degree of autonomy
<b>- professional competences of the specialty (PC):</b>					
PC1.	Ability to collect medical information about the patient and analyze clinical data.	Critical understanding of problems in the field and at the border of the fields of knowledge	Ability to solve problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethical responsibilities	Use of foreign languages in professional activities	Responsibility for contribution to professional knowledge and practice and/or evaluation of the results of teams and collectives
PC 2.	Ability to determine the	Critical thinking of problems in the	Ability to solve problems in new		Managing work or learning processes

	necessary list of laboratory and instrumental studies and evaluate their results.	field and at the boundaries of fields of knowledge	or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethical responsibilities		that are complex, unpredictable and require new strategic approaches
PC 3.	Ability to installation previous clinical diagnosis disease	Critical thinking of problems in the field and at the boundaries of fields of knowledge	Ability to solve problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethical responsibilities		Responsibility for contributing to professional knowledge and practice and/or evaluating the performance of teams and collectives
PC 4.	The ability to determine the necessary regime of work and rest in the treatment and prevention of diseases.	Critical thinking of problems in the field and at the boundaries of the fields of knowledge	Specialized skills/problem-solving skills necessary for conducting research and/or carrying out innovative activities to develop new knowledge and procedures	Clear and unambiguous presentation of one's own knowledge, conclusions and arguments to specialists and non-specialists, in particular to people who are studying	Managing work or learning processes that are complex, unpredictable and require new strategic approaches
PC 5.	The ability to determine the nature of nutrition in the treatment and prevention of diseases of patients of various ages.	Critical thinking of problems in the field and at the boundaries of the fields of knowledge	Specialized skills/problem-solving skills necessary for conducting research and/or carrying out innovative activities to develop new knowledge and procedures	Clear and unambiguous presentation of one's own knowledge, conclusions and arguments to specialists and non-specialists, in particular to people who are studying	Managing work or learning processes that are complex, unpredictable and require new strategic approaches
PC 6.	Ability to determine the principles and nature of treatment and	Critical thinking of problems in the field and at the boundaries of fields of	Ability to solve problems in new or unfamiliar environments in the presence of	Clear and unambiguous presentation of one's own knowledge,	Managing work or learning processes that are complex, unpredictable and require new

	prevention of diseases.	knowledge	incomplete or limited information, taking into account aspects of social and ethical responsibilities	conclusions and arguments to specialists and non-specialists, in particular to people who are studying	strategic approaches
PC 7.	Ability to diagnose emergency conditions.	Critical thinking of problems in the field and at the boundaries of fields of knowledge	Ability to solve problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethical responsibilities	Clear and unambiguous presentation of one's own knowledge, conclusions and arguments to specialists and non-specialists, in particular to people who are studying	Responsibility for contributing to professional knowledge and practice and/or evaluating the performance of teams and collectives
PC 8.	The ability to determine the tactics of providing emergency medical care.	Critical thinking of problems in the field and at the boundaries of fields of knowledge	Ability to solve problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethical responsibilities	Clear and unambiguous presentation of one's own knowledge, conclusions and arguments to specialists and non-specialists, in particular to people who are studying	Responsibility for contributing to professional knowledge and practice and/or evaluating the performance of teams and collectives
PC 9.	Ability to carry out medical evacuation measures.	Specialized conceptual knowledge that includes current scientific achievements in the field of professional activity or field of knowledge and is the basis for original thinking and conducting research	Ability to solve problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethical responsibilities	Clear and unambiguous communication of one's own knowledge, conclusions and arguments to specialists and non-specialists, in particular to persons studying	Managing work or learning processes that are complex, unpredictable and require new strategic approaches
PC 10	Ability to perform medical manipulation	Specialized conceptual knowledge that includes current scientific	Ability to solve problems in new or unfamiliar environments in the presence of	Clear and unambiguous presentation of one's own knowledge,	Managing work or learning processes that are complex, unpredictable and require new

		achievements in the field of professional activity or field of knowledge and is the basis for original thinking and conducting research	incomplete or limited information, taking into account aspects of social and ethical responsibilities	conclusions and arguments to specialists and non-specialists, in particular to people who are studying	strategic approaches
PC 11.	Ability to solve medical problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethical responsibility	Critical thinking of problems in the field and at the boundaries of fields of knowledge	Ability to solve problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethical responsibilities	Clear and unambiguous presentation of one's own knowledge, conclusions and arguments to specialists and non-specialists, in particular to people who are studying	Responsibility for contributing to professional knowledge and practice and/or evaluating the performance of teams and collectives
PC 15.	Ability to perform performance appraisal	Critical thinking of problems in the field and at the boundaries of fields of knowledge	Ability to solve problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethical responsibilities	Clear and unambiguous presentation of one's own knowledge, conclusions and arguments to specialists and non-specialists, in particular to people who are studying	Responsibility for contributing to professional knowledge and practice and/or evaluating the performance of teams and collectives
PC 16.	Ability to maintain medical documentation, including electronic forms.	Critical understanding of problems in the field and at the border of the fields of knowledge	Specialized skills/problem-solving skills necessary for conducting research and/or carrying out innovative activities with the aim of developing new knowledge and procedures	Clear and unambiguous communication of own knowledge, conclusions and arguments to specialists and non-specialists, in particular to learners	Managing work or learning processes that are complex, unpredictable and require new strategic approaches
PC 21.	It is clear and	Critical thinking	Ability to solve	Use of foreign	Responsibility for

	unambiguous to convey one's own knowledge, conclusions and arguments on health care problems and related issues to specialists and non-specialists, in particular to people who are studying.	of problems in the field and at the boundaries of fields of knowledge	problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethical responsibilities	languages in professional activities	contributing to professional knowledge and practice and/or evaluating the results of team and collective activities
PC 24.	Adherence to ethical principles when working with patients and laboratory animals.	Specialized conceptual knowledge that incorporates current scientific developments in the field of professional activity or field of knowledge and provides a basis for original thinking and research	Ability to integrate knowledge and solve complex problems in broad or multidisciplinary contexts	Clear and unambiguous presentation of one's own knowledge, conclusions and arguments to specialists and non-specialists, in particular to people who are studying	Managing work or learning processes that are complex, unpredictable and require new strategic approaches
PC 25.	Adherence to professional and academic integrity, to be responsible for the reliability of the obtained scientific results.	Critical understanding of problems in the field and at the border of the fields of knowledge.	Ability to integrate knowledge and solve complex problems in broad or multidisciplinary contexts	Use of foreign languages in professional activities	Ability to continue learning with a high degree of autonomy

### LEARNING OUTCOMES:

#### Distribution of learning outcomes by types of learning activities

Competencies that the applicant must master	Program learning outcomes	Names of educational disciplines, practices
GC 1 – 8, 10-15 PC 1 –11, 15, 16, 21, 24 , 25.	PLO 1 –10, 14-19 21, 22, 24-28	Physical rehabilitation and sports medicine

**Integrative final program learning outcomes, the formation of which is facilitated by the educational discipline:**

PLO 1. Have thorough knowledge of the structure of professional activity. To be able to carry out professional activities that require updating and integration of knowledge. To be responsible for professional development, the ability for further professional training with a high level of autonomy.

PLO 2. Understanding and knowledge of basic and clinical biomedical sciences, at a level sufficient for solving professional tasks in the field of health care.

PLO 3. Specialized conceptual knowledge, which includes scientific achievements in the field of health care and is the basis for conducting research, critical understanding of problems in the field of medicine and related interdisciplinary problems.

PLO 4. Identify and select leading clinical symptoms and syndromes (according to list 1); according to standard methods, using preliminary data of the patient's history, data of the patient's examination, knowledge about the person, his organs and systems, establish a preliminary clinical diagnosis of the disease (according to list 2).

PLO 5. Collect complaints, life and disease history, assess the patient's psychomotor and physical development, the state of the organs and systems of the body, based on the results of laboratory and instrumental studies, evaluate information regarding the diagnosis (according to list 4), taking into account the patient's age.

PLO 6. To establish the final clinical diagnosis by making a reasoned decision and analyzing the received subjective and objective data of clinical, additional examination, carrying out differential diagnosis, observing the relevant ethical and legal norms, under the control of the head physician in the conditions of a health care institution (according to list 2).

PLO 7. Prescribe and analyze additional (mandatory and optional) examination methods (laboratory, functional and/or instrumental) (according to list 4) of patients with diseases of organs and body systems for differential diagnosis of diseases (according to list 2).

PLO 8. Determine the leading clinical syndrome or establish what determines the severity of the condition of the victim/victim (according to list 3) by making a reasoned decision and assessing the person's condition under any circumstances (in the conditions of a health care facility and outside its borders, including .h. in conditions of an emergency and hostilities, in field conditions, in conditions of lack of information and limited time).

PLO 9. Determine the nature and principles of treatment (conservative, operative) of patients with diseases (according to list 2), taking into account the age of the patient, in the conditions of a health care institution, outside its borders and at the stages of medical evacuation, including in field conditions, on the basis of a preliminary clinical diagnosis, observing the relevant ethical and legal norms, by making a reasoned decision according to existing algorithms and standard schemes, in case of the need to expand the standard scheme, be able to justify personalized recommendations under the control of the head physician in the conditions of a medical institution.

PLO 10. Determine the necessary regime of work, rest and nutrition based on the final clinical diagnosis, observing the relevant ethical and legal norms, by making a reasoned decision according to existing algorithms and standard schemes.

PLO 14. Determine tactics and provide emergency medical care in emergency situations (according to list 3) in limited time in accordance with existing clinical protocols and standards of treatment.

PLO 15. To organize the provision of medical aid and medical evacuation measures to the population and military personnel in emergency situations and hostilities, including in field conditions.

PLO 16. Form rational medical routes for patients; organize interaction with colleagues in their own and other institutions, organizations and institutions; to apply tools for the promotion of medical services in the market based on the analysis of the needs of the population, in the conditions of a health care institution, its division and in a competitive environment.

PLO 17. To perform medical manipulations (according to list 5) in the conditions of a medical institution, at home or at work based on a previous clinical diagnosis and/or indicators of the patient's condition by making a reasoned decision, observing the relevant ethical and legal norms.

PLO 18. To determine the state of functioning and limitations of a person's vital activities and the duration of incapacity for work with the preparation of relevant documents, in the conditions of a health care institution, based on data about the disease and its course, peculiarities of a person's professional activity, etc. Maintain medical documentation regarding the patient and the contingent of the population

on the basis of regulatory documents.

PLO 19. To plan and implement a system of anti-epidemic and preventive measures regarding the occurrence and spread of diseases among the population.

PLO 21. Search for the necessary information in the professional literature and databases of other sources, analyze, evaluate and apply this information.

PLO 22. Apply modern digital technologies, specialized software, statistical methods of data analysis to solve complex health care problems.

PLO 24. To organize the necessary level of individual safety (own and the persons they care about) in case of typical dangerous situations in the individual field of activity.

PLO 25. It is clear and unambiguous to convey one's own knowledge, conclusions and arguments on health care problems and related issues to specialists and non-specialists.



PLO 26. Manage work processes in the field of health care, which are complex, unpredictable and require new strategic approaches, organize work and professional development of personnel taking into account the acquired skills of effective teamwork, leadership positions, adequate quality, accessibility and fairness, ensuring provision of integrated medical care.

PLO 27. Communicate freely in the state language and in English, both orally and in writing for discussion professional activity, research and projects.

PLO 28. Make effective decisions on health care issues, assess the necessary resources, take into account social, economic and ethical consequences.

**Learning outcomes** are a set of knowledge, abilities, skills, and other competencies acquired by a person in the learning process, which can be identified, quantified and measured.

As a result of studying the discipline "Pediatrics", the student must:

I. To acquire modern knowledge regarding:

– the main patterns of physical and neuropsychological development of children of different age groups;

- the clinical significance of the age-related anatomical and physiological features of the child's body; - rules and sequence of questioning and examination of the patient;

– semiotics of syndromes of damage to various systems and the most common diseases of the children's body – principles of rational feeding and nutrition of healthy young children;

- nutrition rules for children older than one year.

II. Be able to apply knowledge in practical situations:

1. Demonstrate mastery of the moral and deontological principles of a medical specialist and the principles of professional subordination in a children's clinic.

2. Draw a conclusion about the state of physiological functions of the child's body, its systems and organs:

- to determine the main indicators of the activity of the cardiovascular and respiratory systems (pulse, blood pressure, breathing).

3. Demonstrate mastery of the skills of clinical and paraclinical examination of children of different ages:

- demonstrate anthropometric measurements of children and draw a conclusion about physical;

- demonstrate assessment of psychomotor development of children of different ages;

- to analyze the age-related features of body functions;

- demonstrate clinical examination of various organs and systems in healthy and sick children;

- analyze the results of instrumental, laboratory methods of research of various organs and systems in healthy and sick children; - interpret the state of the child's body systems.

4. Demonstrate the ability to prepare a daily diet for healthy children of various ages:

- calculate and make up the daily diet for young children;

- adjust the diet of children older than one year.

## **2. The program of the course**

The program material on the subject "Physical rehabilitation, sports medicine" consists of theoretical and practical sections.

The theoretical section is professionally applied nature and realized through lectures, explanations of educational material in the workshops, self-study of educational materials, preparation of individual tasks, participation in scientific student circle.

The practical section involves mastering binding practical skills and abilities.

### **Physical rehabilitation, sports medicine**

#### **2.1. Sports Medicine**

*Specific objectives:*

1. Have an understanding of sports medicine to know its purpose and basic tasks.

2. Understand the importance of medical (drug) control in recreational and sports training.
3. To have a comprehensive medical examination procedure of those engaged in physical activity.
4. Analyze data with a comprehensive medical examination, physical development, functional ability and health of persons surveyed.
5. Do medicinal conclusion from a survey, to address issues of access to sports and physical education, to divide the medical group.
6. Giving advice on choosing the optimal type of exercise, recreation and health and drilling motor regimes depending on the physical condition.
7. To interpret changes in key physiological systems under the influence of physical activity of varying intensity.
8. Identify external features of different degrees of fatigue when performing exercise.
9. Know prepathological causes or conditions, and risk factors for sudden death in wasteful physical education and sports.
10. To be able to diagnose acute and chronic physical stress, as well as other diseases and injuries resulting from inadequate physical activity; own methods of first aid and treatment of acute and chronic physical strain.
11. Giving advice biomedical and other means of preventing overload and recovery of physical performance in recreational training in modern sport.

## ***2.2 Physical rehabilitation***

Specific objectives:

1. To interpret the term "rehabilitation". Know the purpose, objectives and guidelines (aspects) rehabilitation.
2. Have an understanding of "physical rehabilitation" (FR), define its purpose, objectives, means and basic methodological principles.
3. Understand the importance of PR for faster recovery, impaired functions and capacity of patients, improving their quality of life, prevent or eliminate the consequences of the pathological process.
4. Know the definition and characteristics of the method of physical therapy (exercise) as the primary means of PR to explain the mechanisms of action of therapeutic exercise and massage the body, to understand the basic principles of selection and dosage physical activity.
5. To analyze the indications and contraindications for use of PR in patients of different profile.
6. Know the best modes of physical activity to assign patients to inpatient, outpatient and sanatorium stage of rehabilitation, their objectives and content depending on the period FR.
7. Know the basic objectives, features some exercise techniques and special exercises for the pathology of the internal organs, diseases and injuries of the nervous system injuries and diseases of the musculoskeletal system, during surgery and in obstetric practice and pediatrics.
8. Perform selection of the most effective means of FR considering clinical course of disease (stage, stage, degree of functional disorders), comorbidity, and according to the individual characteristics of the body: age, gender, functional ability, level of physical fitness and tolerance to physical exercise.
9. To be able to give patients recommendations on various profiles independent exercise as directed by your doctor explaining features of self-control in the classroom.
10. To be able to evaluate the effectiveness of physical rehabilitation in the process of rehabilitation.

## **3. Information volume of the discipline:**

The study of the discipline takes 75 hours (30 hours of practical classes, 8 hours of lectures, 37 hours of independent work of students) 2,5 ECTS credits.

#### 4. Structure of educational discipline "Physical Rehabilitation and Sports Medicine"

№	Topic	Lectures	Practice	SWS	Individual work
1.	Modern ideas about sport medicine. Concept about medical control. Modern methods of inspection of athletes and sportsmen. An estimation of functional capabilities of organism of man by means of functional tests.	1	2	37	-
2.	Research and evaluation of the functional state of the body through functional tests. Medical conclusion. International classification of functioning, limitations of vital activity and health.	0	2		-
3.	Determination and estimation of general physical capacity and aerobic productivity. Tolerance is to physical activities.	1	2		-
4.	The Pre-pathological states and diseases are at the inefficient engaging in a physical culture and sport.	0	2		-
5.	Recovery and stimulation during wellness and sports training.	0	2		-
6.	General bases of physical rehabilitation. Medical physical education is in the system of physical rehabilitation. Psychological rehabilitation and social work with persons who became disabled during military service and other victims of hostilities.	1	4		-
7.	The basics of therapeutic massage.	0	2		-
8.	Physical rehabilitation clinic of internal diseases.	1	4		-
9.	Physical rehabilitation in diseases and injuries of the nervous system.	1	2		-
10.	Physical rehabilitation in surgery, traumatology and orthopedics.	1	4		-
11.	Features of the application of physical rehabilitation in obstetrics and gynecology.	1	2		-
12.	Features of the physical education of infants. Physical rehabilitation of sick infants.	1	2		-
<b>TOTAL HOURS – 75 / 2,5 CREDITS ECTS</b>		<b>8</b>	<b>30</b>	<b>37</b>	<b>-</b>
<b>Final control</b>					<b>Passed</b>

#### 5. Thematic plan of lectures

№	Topic	Hours
1.	Modern ideas about sport medicine. Concept about medical control. Modern methods of inspection of athletes and sportsmen. An estimation of functional capabilities of organism of man by means of functional tests.	1

2.	Physical performance and its relationship with health indicators.	1
3.	General basics of physical rehabilitation. Exercise therapy as the main tool of FR.	1
4.	Physical rehabilitation clinic in internal medicine.	1
5.	Physical rehabilitation for diseases and injuries of the nervous system.	1
6.	Physical rehabilitation in surgery, traumatology and orthopedics.	1
7.	Physical rehabilitation in obstetric and gynecological practice.	1
8.	Features of physical education of infants. Physical rehabilitation of sick young children.	1
<b>Total hours:</b>		<b>8</b>

### 6. Thematic plan of practical employments

№	Topic	Hours
1.	Medical control during exercise. Methodology of complex medical inspection. Determination and estimation of physical development of man. Acute respiratory disease COVID-19 caused by SARS-CoV-2.	2
2.	Research and evaluation of the functional state of the body through functional tests. International classification of functioning, limitations of vital activity and health.	2
3.	Determination and estimation of general physical capacity and aerobic productivity. Tolerance is to physical activities.	2
4.	The Pre-pathological states and diseases are at the inefficient engaging in a physical culture and sport. A concept about a stimulant.	2
5.	. Facilities of renewal and stimulation are at the health and sporting training	2
6.	The general principles of physical rehabilitation. Psychological rehabilitation and social work with persons who became disabled during military service and other persons affected by the hostilities.	4
7.	Basics of therapeutic massage.	2
8.	Physical rehabilitation clinic of internal diseases.	4
9.	Physical rehabilitation in diseases and injuries of the nervous system.	2
10.	Physical rehabilitation in surgery, traumatology and orthopedics.	4
11.	Features of the application of physical rehabilitation in obstetrics and gynecology.	2
12.	Features of the physical education of infants. Physical rehabilitation of sick infants.	2
<b>Hours:</b>		<b>30</b>

### 7. Types of self work of students (SWS)

№	Topic	Hours	Types of control
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1.	Preparation for practice; Science and instructional materials; formation of practical skills.	4	Current and final control
2.	Writing drug-control card and athlete athlete (form number 061 / o or №162 / O) card and a patient being treated in the office LFK, department of rehabilitation or rehabilitation center (the form №42 / o).	4	Current and final control
3.	Features of the medical monitoring of children, adolescents during exercise. Quantitative assessment of physical health. The choice of individual motor mode.	3	student's report at a practical session and/or a practical conference
4.	General characteristics of the influence of physical activity of varying intensity on the body.	3	Current and final control
5	Medical-pedagogical control during exercise. The sudden death during exercise. The concept of doping in sport.	3	Current and final control
6.	Current approaches to physical rehabilitation of patients with myocardial infarction.	3	Current and final control
7.	Features of physical rehabilitation in diabetes, obesity, gout.	3	Current and final control
8.	Features of physical rehabilitation for pneumonia, pleurisy, asthma.	3	Current and final control
9.	Features of methods of physical rehabilitation in the preoperative and postoperative periods during surgery for chest and abdominal cavity.	3	student's report at a practical session and/or a practical conference
10.	Modern means of physical rehabilitation radiculitis, osteochondrosis.	3	Current and final control
11.	Features contemporary mind-body training women with normal pregnancy.	3	Current and final control
12.	Prevention and correction of posture and flatfoot in children. Alternative means of physical rehabilitation of children with cerebral palsy.	3	student's report at a practical session and/or a practical conference
<b>Hours:</b>		<b>37</b>	

## **8. Individual work-** not planned in the working curriculum for the academic year

### **\* Note: The topics are recommended for independent depth**

Formation of a healthy way of life today.

1. Actual problems of optimization of body weight in human terms today.
2. Features of the medical monitoring of children, adolescents and women in the exercise.
3. Tempering as an effective means to strengthen and restore health.
4. The sudden death during exercise. The problems of doping in sport.
5. Current approaches to physical rehabilitation of patients with myocardial infarction.
6. Features of physical rehabilitation for pneumonia, pleurisy, asthma.
7. Features of physical rehabilitation in stroke.
8. Features of modern psycho-physical preparation of women with normal pregnancy.
9. Modern physical rehabilitation in spinal osteochondrosis.
10. Prevention and correction of posture and flatfoot in children.
11. Alternative means of physical rehabilitation of children with cerebral palsy.

### **List theoretical program matters submitted to final module control**

#### **Physical rehabilitation, sports medicine**

##### **Sports Medicine**

1. Definition of Sports Medicine as a clinical discipline, its main aim, objectives and values in modern medical practice.
2. Current issues of optimizing human motor activity at the present stage, the types of physical activity and their effects on the body.
3. The concept of medical (drug) control during exercise, its main task.
4. Methods of comprehensive medical examination of athletes and sportsmen, types of medical examinations.
5. Main Sections comprehensive medical examination, especially the collecting history (general and sport) and exam organs and systems, physiological characteristics of the circulatory system in trained individuals.
6. Physical development rights, factors affecting it and the features that characterize it.
7. Methods for determination of physical development (somatoscopy and anthropometry).
8. Methods of assessment of physical development (standards, anthropological profile codes, etc.). Recommendations for harmonization or correct physical development depending on its features.
9. The concept of functional tests and their implications in the functional diagnosis. The main tasks of the functional studies.
10. Types of functional tests, depending on the factors affecting.
11. Functional tests of breath (woodwork Ghencea-Sabraze), loading and breathing tests, and methods of evaluation.
12. Functional tests with changes in body position in space (orthostatic, klinostatic), and methods of evaluation.
13. Classification of functional exercise testing.
14. Functional Exercise testing of recovery, their features and settings in which they are measured.
15. Methods of functional test Kushelevskoho Martin (20 sit-ups in 30 seconds.), Especially the calculation of heart rate during the test, evaluation tests.
16. Physiological changes in hemodynamics during exercise.
17. Types of circulatory system response to standard exercise and their characteristics.
18. Problems of diagnosis of physical health at the present stage, the concept of "amount" of physical health.

19. "Adaptation" (VP Kaznacheyeva and RM Baevsky) and "energy" (GL Apanasenko) determine the number of health concepts.
20. Rapid assessment of physical health with preventive examinations. The concept of a "safe level of health."
21. The concept of "human biological age" method of determining the biological age and assessment of biological aging rate.
22. Analysis of complex medical examination. The medical report.
23. Access to physical education (physical education), the main criteria for allocating those involved in the medical group.
24. Admission to sports, determine the optimal type of sports training, contraindications to exercise, age limits for admission of children to the sport.
25. Principles for admission to sports persons with boundary conditions (clinical and electrocardiographic syndrome prearousal ventricular, prehypertensive conditions, connective tissue dysplasia syndrome, etc..).
26. Medical supervision of persons of different sexes and ages (children, adolescents, women, the elderly).
27. Individual motor modes while physical training and sports. Training heart rate depending on the functional and physical condition.
28. The estimated recovery times after exercise of diseases, injuries and damage.
29. Functional tests on force (load tests). Indications and contraindications for the purpose of stress tests and conditions that require special attention during load testing.
30. Terms of load testing.
31. Types and loads the initial value, depending on the individual characteristics of the subject (age, sex, physical fitness, health status).
32. The concept of overall physical performance, aerobic capacity and tolerance to physical exercise.
33. Clinical and functional characteristics threshold of tolerance to physical exercise.
34. Direct and indirect methods for determining physical working capacity and aerobic performance. Submaximal test PWC170, method of calculation and principles of physical capacity in the performance test PWC170 (veloerhometry and steperhometry versions).
35. Determination of maximum oxygen consumption (MSCs) Calculation of the MSK nomogram for Astranda and largest PWC170.
36. Tests Navakki, Ruf'ye, Cooper, methods of their implementation and evaluation of test results.
37. Classes of physical condition. How physical performance of health indicators.
38. The concept of fatigue, fatigue and acute and chronic strain during exercise.
39. The main causes of prepathological and pathological conditions, diseases and injuries during physical training and sports.
40. The concept of "physiological" and "pathological" athletic heart.
41. Overexertion nervous system (overtraining) during physical training and sports, causes, types and stages of overtraining.
42. Acute pathological conditions that occur during exercise (dizziness, gravitational shock, orthostatic collapse, hypoglycemic state, spasm of cerebral vessels, hypnotic sleep, retrograde amnesia, etc..), Causes, diagnosis, emergency care.
43. Chronic physical stress of the circulatory system that develops as a result of inadequate physical activity (stress cardiomyopathy, arrhythmia, hyper- and hypotonic conditions, etc..), Diagnosis, treatment and prevention.
44. Chronic lesions and strain of the musculoskeletal system during exercise (myositis, tendinitis, tenosynovitis, osteoporosis, etc..).
45. Diseases of the nervous and endocrine system, digestive system, urinary organs and other organs and systems in the physical education and sports.
46. Recurring acute manifestations of physical strain (hepatic pain, dyspeptic, proteinuric, hematuric and muscle-pain syndromes).
47. The risk of sudden death during physical training and sports.

48. The concept of doping their types. Acute poisoning and consequences of prolonged use dope. Anabolic syndrome. Organization of doping control.
49. The concept of medical-pedagogical observation, their purpose and objectives.
50. And the organization and methods of exercise.
51. Sanitation requirements for the maintenance of individual sports (indoor and outdoor) facilities, sporting and recreational training, competition, sport events.
52. Methods of teaching medical supervision, determine the total motor density and the training classes, creation of physiological curve classes.
53. External features of different degrees of fatigue during exercise, their assessment.
54. Functional tests with repeated and additional loads in the medical and pedagogical observations estimate of the magnitude of influence of training load by the method of trend analysis.
55. Analysis of medical teaching observations.
56. Physiological mechanisms of recovery. Classification of renewable resources.
57. Biomedical recovery tools and stimulation of physical performance.
58. Pedagogical and psychological recovery tools and stimulation of physical performance.
59. Pharmacological means of preventing fatigue and recovery of sports performance.
60. Application of tempering as a means of disease prevention.

### **Physical Rehabilitation.**

- 61 Determination of physical rehabilitation (FR), its general principles, periods and phases. Active, passive and psychological ways FR.
- 62 Therapeutic physical training (ET) as the primary means of FS, especially the method of exercise, primary and secondary means of exercise, forms, methods and methodological principles of exercise.
- 63 general indications and contraindications for appointment of exercise.
- 64 The mechanisms of therapeutic action of exercise. Classification of exercise. Basic principles of selection and dosage of exercise.
- 65 Modes of motor activity inpatient, out-patient and sanatorium stage of rehabilitation treatment, their objectives and content depending on the period of exercise.
- 66 Features charting and oriented complexes hygienic and therapeutic exercises.
- 67 Physical therapy based on tolerance to physical exercise.
- 68 The definition of massage and its species. Mechanisms of therapeutic effects of massage on the body. The basic techniques of massage.
- 69 Indications and contraindications for the purpose of therapeutic massage.
- 70 Accounting course effectiveness of physical rehabilitation.
- 71 Indications and contraindications for the purpose of physical rehabilitation in diseases of the circulatory system.
- 72 Assessment of motor capacity and determination of functional class in patients with coronary artery disease. The choice of the amount of motor activity, forms and methods of exercise therapy in patients with coronary artery disease at different stages of physical rehabilitation.
- 73 Objectives and methods of RF features in acute myocardial infarction with a list of specific exercises.
- 74 Objectives and methods of RF features of ischemic heart disease to the list of special exercises.
- 75 Objectives and features of the methodology FY hypertension, hypotension and autonomic dysfunction with a list of specific exercises.
- 76 Indications and contraindications for the purpose of physical rehabilitation in bronchopulmonary pathology.
- 77 Objectives and methods of RF features of acute bronchitis, pneumonia and pleurisy with a list of specific exercises.
- 78 Objectives and methods of RF features in chronic bronchitis, asthma, emphysema, bronchiectasis, pulmonary tuberculosis with a list of specific exercises.
- 79 Indications and contraindications for appointment of DF in diseases of the digestive system.
- 80 Tasks and features RF techniques in chronic gastritis, gastric ulcer and duodenal ulcers, diseases of the biliary tract and intestines, splanhoptoz a list of special exercises.



- 81 Indications and contraindications for appointment of RF in renal disease and metabolic disorders.
- 82 Tasks and features techniques TG kidney disease and metabolic disorders (obesity, diabetes, gout).
- 83 Indications and contraindications to the use of physical rehabilitation in diseases, injuries and injuries of the central nervous system.
- 84 Objectives and features of the methodology TG acute cerebrovascular accident (stroke), treatmentprovision, passive and active special exercises and massage in spastic paralysis.
- 85 Features of the application DF in closed and open brain injury.
- 86 Modern technology and innovative means of physical rehabilitation of children with cerebral palsy.
- 87 Indications and contraindications to the use of physical rehabilitation in diseases and injuries of the peripheral nervous system.
- 88 Objectives and methods of RF features in traumatic spinal cord injury. Treatment provisions, passive and active special exercises and massage with flaccid paralysis.
- 89 Features of restoration and compensatory therapy in neuritis of the facial nerve, special exercise.
- 90 Some methods physiotherapist neuritis at the elbow and radial nerves, osteochondrosis, radiculitis.
- 91 Indications and contraindications for the purpose of physical rehabilitation in surgery.
- 92 Objectives and features of the methodology in TG preoperative and postoperative periods in surgical interventions on the abdominal organs, depending on the motor mode and postoperative course with a list of specific exercises.
- 93 Objectives and features of the methodology in TG preoperative and postoperative periods insurgical interventions on the organs of the thoracic cavity, depending on the motor mode and postoperative course with a list of specific exercises.
- 94 Indications and contraindications for the use of FR for injuries of the musculoskeletal system.
- 95 Objectives and methods of physical rehabilitation, depending on the period (immobilization, postimmobilisation, recovery) and treatment. Justification of the choice of means and forms of RF.
- 96 Features specific exercise techniques in diaphyseal fractures of the upper and lower limbs, intra-articular fractures and dislocations, compression fractures of the spine and pelvis fractures.
- 97 Evaluating the effectiveness of physical rehabilitation in trauma patients.
- 98 Indications and contraindications for the use of funds in FY orthopedic disorders in children.
- 99 Features techniques and specific exercises with flat feet, posture and scoliosis depending on the degree.
- 100 Physiological changes in a woman's body during pregnancy.
- 101 Main tasks and features mind-body training methods women with normal pregnancy according to trimester.
- 102 Features method of application of exercise in childbirth and the postnatal period. as well as operative delivery.
- 103 Main task features exercise techniques and specific exercises in the wrong position and breech fetus.
- 104 Indications and contraindications for the purpose of physical rehabilitation in gynecological practice.
- 105 Challenges and features TG for chronic inflammatory diseases of female genital anomaliesprovisions uterus, disorders of menstrual function and functional incontinence.
- Features 106 physical education healthy babies.
- 107 types of physical exercises used in physical education healthy babies.
- 108 General indications and contraindications for the use of exercise therapy in young children.
- 109 Physiological effects of massage on the body of children, indications and contraindications for its use.
- 110 Basic methodological principles of application of RF in pediatrics.
- 111 Problems and features of the methodology of medical gymnastics and massage in infants with acute pneumonia.
- 112 Problems and features of the methodology physiotherapist in infants with rickets, malnutrition. Congenital muscular torticollis, congenital hip dislocation.

## **9. LIST OF PRACTICAL SKILLS AND ABILITIES**

### **List of practical skills in sports medicine:**

- master the technique of complex medical examination of persons engaged in physical culture and sports,
- decide on access to exercise and to select the most optimal form;
- conduct somatoscopy and somatometry, based on analysis of the data to assess the physical development of recommendations for its correction in the training and improving processes;
- conduct functional tests to determine the functional state of circulatory, respiratory and autonomic nervous system, and based on the analysis of the indicators give an overall assessment of the functional ability of the body with recommendations for their corrections during exercise;
- identify and assess physical performance and tolerance to physical exercise using stress tests with providing appropriate recommendations for the optimal motor mode according to age, gender and other personal characteristics of the human body;
- identify and assess the level of physical health (physical condition) rights and make recommendations for its improvement by means of physical culture;
- diagnose early signs of fatigue, acute and chronic stress, as well as other diseases, sports injuries and damages arising from irrational physical culture and sports; prescribe the means of treatment and prevention;
- conduct medical-pedagogical monitoring during exercise;
- analyze and evaluate the conditions of the exercise, and adequate training loads functionality of the body at different stages of training and improving the process for further optimization;
- prescribe the means and methods of restoration of functional capacity, physical performance and health during physical education and sport;
- provide advice on important issues concerning the application of physical culture to maintain and promote health;
- maintain sanitary-educational work among the population on healthy lifestyles, improving the role of physical culture and hardening.

### **List of practical skills in physical rehabilitation:**

- carry out inspection, examination and testing of functionality and motor function in patients with different pathologies for selection and appointment of timely treatment in adequate physical rehabilitation;
- based on the survey results to prescribe the optimal mode of motor activity, passive and active exercise, other means of physical rehabilitation (massage, training, etc.) patients, depending on the nature of disease, stage of disease, individual characteristics (gender, age, physical fitness functional abilities), and the degree of functional impairment at different stages of physical rehabilitation;
- identify potential complications and temporary contraindications in physical rehabilitation;
- implement differentiated assignment means and forms of physical rehabilitation, and justify the choice of specific exercises and their dosage to patients with disorders of the circulatory system, diseases of the respiratory, digestive system and metabolism;
- implement differentiated assignment means and forms of physical rehabilitation, choose the most optimal treatment position, passive and active exercises, massage techniques to patients with diseases and injuries of the nervous system at different stages of treatment, depending on the degree of motor function;
- implement differentiated assignment means and forms of physical rehabilitation patients in the preoperative and postoperative periods of treatment, justify the choice of special exercises and their dosage to patients after surgery on the organs of the chest and abdomen;
- implement differentiated assignment means and forms of physical rehabilitation of patients with injuries of the musculoskeletal system, depending on the location of injury and rehabilitation period, justify the choice of special exercises, their doses and lightweight assumptions for their implementation;
- implement differentiated forms and appointment of improving physical training or physical rehabilitation during pregnancy (normal, complicated), childbirth, the postpartum period; as well as various gynecological diseases;

- implement differentiated assignment means and forms of physical rehabilitation in some diseases in infants, justify the choice of medical provisions, special exercises and their dosage depending on the nature of disease and the degree of movement disorders;
- conduct repeated evaluation of patients to determine the adequacy of physical activities and evaluation tools used in physical rehabilitation, make appropriate adjustments;
- provide advice on current issues related to the use of physical rehabilitation for secondary prevention of diseases, prevention of early or late complications, quality of life of patients.

## 10. Teaching methods

**Methods of using the word.** The main types of verbal transmission of knowledge in the process of physical rehabilitation and sports medicine are: explanation, narration and conversation (introductory conversations; conversations aimed at communicating new knowledge, and conversations to check the acquired knowledge and the degree of awareness of students' actions).

**Methods of providing visibility.** This group of teaching methods includes the display of movements in nature or in the form of images perceived by direct observation. The study of functional samples is always accompanied by their visual demonstration by the teacher or students under the direct supervision of the teacher. A demonstration is always accompanied by an explanation. Moreover, the word in this case plays an auxiliary role. Basically, in the educational work, a demonstration of the means of physical therapy in the form of physical exercise is used by the teacher himself or one of the students. The demonstration may precede the explanation, be accompanied by the explanation, or be carried out after the explanation. The demonstration achieves its goal if the movement shown is clearly visible to all students, if it is performed technically correctly, if it is pre-organized and the attention of the students is correctly directed.

**Methods of practical exercises.** In the theory and practice of physical rehabilitation and sports medicine, the term "exercise" includes two different concepts: a) a means of physical rehabilitation, that is, a specially organized motor action; b) the method of using the means, the essence of which consists in the deliberate, often multiple repetition of specified motor actions with the aim of normalizing physical activity in the complex treatment of diseases, prevention of their exacerbations and complications, restoration of the proper quality of life of a sick person.

## 11. Distribution points that get students

The form of the final control of study success is a credit. Semester assessment of subjects is carried out after the end of its study, before the beginning of the examination session.

Current control is performed during the training sessions and aims at checking mastering educational material. The form of the current control during the classes defined working curriculum subjects.

Evaluation of current educational activity. In evaluating the mastering of each topic for current educational activity the student score for the 4-point scale on the basis of approved evaluation criteria for the relevant discipline. This takes into account all types of work, provided the curriculum. The student must obtain an assessment of each topic. Forms assessment of current educational activity should be standardized and include control of theoretical and practical training. Exhibited the traditional assessment scale are converted into points.

*The maximum number* of points that a student can collect for current educational activity for credit discipline "Physical Rehabilitation and Sports Medicine" is 200 points.

*The minimum number* of points that a student must collect for current educational activity for enrollment courses is 120 points.

Calculating the number of points is based on student evaluations received by traditional scale while learning subjects during the semester, by calculating the arithmetic (SA), rounded to two decimal places. The resulting value is converted into points by multi-scale as follows:

$$X = CA \times 200 / 5$$

For convenience, a table conversion 200 - point scale:

Table 1

**Conversion of the average score for current activity in multimark scale for courses, culminating her credits (differentiated credit)**

4-point scale	200- point scale	4-point scale	200- point scale	4-point scale	200- point scale	4-point scale	200- point scale
5	200	4.45	178	3.92	157	3.37	135
4.97	199	4.42	177	3.89	156	3.35	134
4.95	198	4.4	176	3.87	155	3.32	133
4.92	197	4.37	175	3.84	154	3.3	132
4.9	196	4.35	174	3.82	153	3.27	131
4.87	195	4.32	173	3.79	152	3.25	130
4.85	194	4.3	172	3.77	151	3.22	129
4.82	193	4.27	171	3.74	150	3.2	128
4.8	192	4.24	170	3.72	149	3.17	127
4.77	191	4.22	169	3.7	148	3.15	126
4.75	190	4.19	168	3.67	147	3.12	125
4.72	189	4.17	167	3.65	146	3.1	124
4.7	188	4.14	166	3.62	145	3.07	123
4.67	187	4.12	165	3.57	143	3.02	121
4.65	186	4.09	164	3.55	142	3	120
4.62	185	4.07	163	3.52	141	less 3	not enough
4.6	184	4.04	162	3.5	140		
4.57	183	4.02	161	3.47	139		
4.52	181	3.99	160	3.45	138		
4.5	180	3.97	159	3.42	137		
4.47	179	3.94	158	3.4	136		

Independent work of students is evaluated during the current control of theme on the appropriate lesson. Mastering of themes which dart out only on independent work is controlled only at the final control.

Final control is carried out to assess learning outcomes at a particular educational qualification level and its individual stages completed national scale and scale ECTS. Final control includes control and certification semester student. Semester control is carried out in the form of offset (differentiated credit) in the amount of educational material defined work program and in the terms established working curriculum, individual curriculum the student.

Semester differentiated offset - a form of final control, which is to assess the mastering of educational material exclusively on the basis of the performance of all types of educational works provided work study program. Semester (differentiated) test results exhibited by current control.

### **12. Determination of the number of points that a student collected from discipline**

Evaluation of discipline, a form of final control which is differentiated credit is based on the current training and calculated in points, according to Table 1.

Evaluation of discipline, a form of which is the final control test is based on current educational activities and expressed scale "Passed" or "not passed". To enroll a student must obtain for current learning activity score of at least 60% of the maximum amount of points in the discipline (120 points).

Points Converted regardless of discipline both in scale ECTS, and a 4-point scale.

Score scale ECTS 4-point scale not converted and vice versa.

Scores students studying for another degree, to the number of points gained in the discipline ranked on a scale ECTS as follows:

Table 2

Estimate ECTS	Statistical index
A	Best 10% of students
B	Next 25% of students
C	Next 30 % of students
D	Next 25% of students
E	Last 10% of students

Scores of discipline for students who successfully completed the program, converted into traditional 4-point scale by absolute criteria, which are listed in the table below:

*Table 3*

Points of discipline	Estimate a 4-point scale
From 170 to 200 points	5
From 140 to 169 points	4
From 139 points to the minimum number of points that a student must score	3
Below the minimum number of points that a student must score	2

## 14. Literature

### *Main*

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2. Fizychna reabilitatsiia, sportyvna medytsyna : Pidruchnyk dlia studentiv vyshchykh medychnykh navchalnykh zakladiv / V. V. Abramov, V. V. Klapchuk, O. B. NekhanevychA.V. Mahlovanyi [ta in.] ; za red. prof. V. V. Abramova ta dots. O. L. Smyrnovoi. – Dnipropetrovsk, Zhurfond, 2014. – 456 s.
3. Sportyvna medytsyna: Pidruchnyk dlia studentiv ta likariv / Za zahalnoiu redaktsiieiu prof. V.M. Sokruta – Donetsk: «Kashtan», 2013. – 472 s.
4. Mahlovanyi A, Mahlovana H, Mukhin H. Osnovy fizychnoi reabilitatsii. Lviv: Liha-Pres; 2006.150 s. 6. Mykhaliuk YeL, Cherepok OO, Tkalic IV. Fizychna reabilitatsiia pry zakhvoriuvanniakh khrebt: navch. posib. Zaporizhzhia: ZDMU; 2016. 90 s.
5. American Council of Academic Physical Therapy Clinical Education Summit Report and Recommendations. <https://www.acapt.org/docs/default-source/pdfs/clinical-education-summit-2014-final-report-1.pdf>. Accessed August 10, 2020.
6. Best Practices for Physical Therapist Clinical Education (BPPTCE) 2017 Report to the House of Delegates: Stakeholder Feedback and Recommendations. <https://www.apta.org/uploadedFiles/APTAorg/Educators/CETFFExecutiveSummary.pdf>. Accessed August 10, 2020
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### *Additional*

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<http://www.kmu.gov.ua/control/uk/cardnpd?docid=248719473>

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[sportbuk.com/.../proekt-novoho-zakonu-ukraji...](http://sportbuk.com/.../proekt-novoho-zakonu-ukraji...)

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