MINISTRY OF HEALTH CARE OF UKRAINE

ODESA NATIONAL MEDICAL UNIVERSITY

Department of physical rehabilitation, sports medicine and physical training

APPROVED

Vice-rector for scientific and pedagogical work

_____ Eduard BURYACHKIVSKY

September 01, 2025

WORK PROGRAM OF THE EDUCATION DISCIPLINE «PHYSICAL AND REHABILITATION MEDICINE»

Level of higher education: second (master's)

Area of knowledge: 22 "Health"

Specialty: 222 «Medicine»

Educational and professional program: Medicine

2025

Work program based on the educational and professional program "Medicine" for training specialists of the second (master's) level of higher education in specialty 222 'Medicine' in the field of knowledge 22 "Health Care," approved by the Academic Council of ONMedU (Minutes No. 10 of June 27, 2024) and the educational and professional program "Medicine" for training specialists of the second (master's) level of higher education in specialty I 2 'Medicine' in the field of knowledge I "Health Care and Social Security," approved by the Academic Council of ONMedU (Minutes No. 10 of June 26, 2025).

DEVELOPERS:
Head of the Department MD, Professor Olga Iushkovska
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The work program was approved at the meeting of the Department of physical rehabilitation, sports medicine and physical education
Protocol № 1 dated 08.26.2025.

Head of the department _____ Olga IUSHKOVSKA

Approved by the guarantor of
the educational and professional program _____ Valeria MARICHEREDA

Approved by the subject cycle methodical commission for therapeutic disciplines of ONMEDU
Protocol № 1 dated 08.29.2025

Head of the subject cycle methodical commission on therapeutic disciplines of ONMEDU

_____ Olena VOLOSHYNA

Reviewed and approved at the meeting of the department _____
_____

Protocol №.__ dated _____.____ 20_____

Head of the department _____Olga IUSHKOVSKA

Reviewed and approved at the meeting of the department _____
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Protocol №.__ dated _____.____ 20_____

Head of the department _____Olga IUSHKOVSKA

1. DESCRIPTION OF THE ACADEMIC DISCIPLINE

Name of indicators	Field of knowledge, specialty, specialization, level of higher education	Characteristics of the academic discipline
Total Number: Credits: 3 Hours: 90	Field of knowledge 22 "Healthcare" Specialty 222 "Medicine" Level of higher education second (master's)	Full-time form of study Compulsory discipline
		Year of preparation: 4
		Semesters VII-VIII
		Lectures (16 hours)
		Seminars (0 hours)
		Practical (34 hours)
		Laboratory (0 hours)
		Independent work (40 hours)

2. GOALS AND OBJECTIVES OF THE ACADEMIC DISCIPLINE, COMPETENCES, PROGRAM LEARNING OUTCOMES

Goal: To form in higher education students a systematic understanding of modern principles of physical rehabilitation, acquisition of theoretical knowledge and practical skills necessary for assessing the state of health and functioning of a person, planning and implementing rehabilitation interventions aimed at restoring, compensating for or supporting lost functions, improving the quality of life of patients, their social integration and professional reintegration.

Objectives:

1. Theoretical training

• To master the basic concepts and categories of physical and rehabilitation medicine in accordance with the ICF (International Classification of Functioning, Disability and Health).

• To study modern models of organizing rehabilitation care in Ukraine and the world, including the principles of multidisciplinary and inter-sectoral interaction.

• To get acquainted with the legal and regulatory principles of the rehabilitation system in Ukraine.

2. Practical training

• Learn to assess the patient's condition using clinical scales, tests and methods of functional diagnostics.

• Master the principles of drawing up an individual rehabilitation plan (IRP) taking into account the biopsychosocial model of health.

• Acquire skills in the application of physical factors, kinesiotherapy, occupational therapy, speech therapy and psychological support within the framework of a rehabilitation program.

3. Professional and ethical training

• Develop an understanding of professional and ethical standards of work.

• Foster responsibility for making patient-centered clinical decisions and the ability to work in a multidisciplinary team.

• Develop readiness for continuous professional development and the implementation of innovative rehabilitation methods.

The process of studying the discipline is aimed at forming elements of the following competencies: the principles of the functioning of the rehabilitation system in Ukraine.

General (GC):

GC1. Ability to think abstractly, analyze and synthesize

GC2. Ability to learn and master modern knowledge

GC3. Ability to apply knowledge in practical situations

GC4. Knowledge and understanding of the subject area and understanding of professional activity

GC5. Ability to adapt and act in a new situation

GC6. Ability to make informed decisions
GC7. Ability to work in a team
GC8. Ability to interact with others
GC10. Ability to use information and communication technologies
GC11. Ability to search, process and analyze information from various sources

Special (SC):

SC1. Ability to collect medical information about the patient and analyze clinical data
SC2. Ability to determine the necessary list of laboratory and instrumental studies and evaluate their results
SC3. Ability to establish a preliminary and clinical diagnosis of the disease
SC4. Ability to determine the necessary work and rest regime in the treatment and prevention of diseases
SC5. Ability to determine the nature of nutrition in the treatment and prevention of diseases
SC6. Ability to determine the principles and nature of treatment and prevention of diseases
SC9. Ability to conduct medical and evacuation measures
SC10. Ability to perform medical manipulations
SC11. 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
SC13. Ability to carry out sanitary-hygienic and preventive measures
SC16. Ability to maintain medical records, including electronic forms
SC 17. Ability to assess the impact of the environment, socio-economic and biological determinants on the health of an individual, family, population
SC 21. Ability to clearly and unambiguously convey one's own knowledge, conclusions and arguments on health care problems and related issues to specialists and non-specialists, in particular to persons who are studying
SC 24. Compliance with ethical principles when working with patients, laboratory animals
SC 26. Ability to determine the tactics of managing persons subject to dispensary supervision

Program learning outcomes (PLO):

PLO1. Have a thorough knowledge of the structure of professional activity. Be able to carry out professional activities that require updating and integrating knowledge. Be responsible for professional development, the ability to further professional learning with a high level of autonomy.
PLO2. Understanding and knowledge of fundamental and clinical biomedical sciences, at a level sufficient to solve professional tasks in the field of health care.
PLO3. Specialized conceptual knowledge that 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.
PLO4. Identify and identify leading clinical symptoms and syndromes (according to list 1); using standard methods, using preliminary data from the patient's history, patient examination data, knowledge about the person, his organs and systems, establish a preliminary clinical diagnosis of the disease (according to list 2).
PLO5. Collect complaints, anamnesis of life and disease, assess the patient's psychomotor and physical development, the state of organs and body systems, based on the results of laboratory and instrumental studies, evaluate information on the diagnosis (according to list 4), taking into account the patient's age.
PLO6. Establish a final clinical diagnosis by making a reasoned decision and analyzing the obtained subjective and objective data of clinical, additional examination, differential diagnosis, adhering to relevant ethical and legal norms, under the supervision of the head physician in a healthcare facility (according to list 2).
PLO7. Assign and analyze additional (mandatory and optional) examination methods (laboratory, functional and/or instrumental) (according to list 4), patients with diseases of organs and body systems for differential diagnosis of diseases (according to list 2).
PLO8. Identify the main clinical syndrome or symptom that determines the severity of the victim's condition (according to list 3) by making a reasoned decision about the person's condition under any circumstances (in a healthcare facility, outside it), including in an emergency situation and combat

operations, in field conditions, in conditions of lack of information and limited time.
PLO10. Determine the necessary regime of work, rest and nutrition based on the final clinical diagnosis, adhering to relevant ethical and legal norms, by making a reasoned decision according to existing algorithms and standard schemes.
PLO14. Determine tactics and provide emergency medical care in emergency conditions (according to list 3) in conditions of limited time in accordance with existing clinical protocols and treatment standards.
PLO16. Form rational medical routes for patients; organize interaction with colleagues in their own and other institutions, organizations and institutions; apply tools for promoting medical services in the market, based on an analysis of the needs of the population, in the conditions of the functioning of a healthcare institution, its unit, in a competitive environment.
PLO18. Determine the state of functioning and limitations of a person's vital activities and the duration of incapacity for work with the execution of relevant documents, in the conditions of a healthcare institution based on data on the disease and its course, the characteristics of the person's professional activity, etc. Maintain medical records of the patient and the population based on regulatory documents.
PLO21. Search for the necessary information in professional literature and databases of other sources, analyze, evaluate and apply this information.
PLO22. Apply modern digital technologies, specialized software, statistical methods of data analysis to solve complex health problems.
PLO23. Assess the impact of the environment on human health to assess the morbidity of the population.

As a result of studying the academic discipline, the higher education applicant must:

Know:

• Basic principles and concepts of physical and rehabilitation medicine according to the biopsychosocial model;
• international and national regulatory legal acts regulating the rehabilitation system;
• classification of rehabilitation interventions and means, their indications and contraindications;
• methods of assessing the functional state of the patient based on the ICF, clinical scales, and tests;
• modern methods and technologies of physical therapy, occupational therapy, speech therapy, and psychological support;
• principles of drawing up an individual rehabilitation plan (IRP) and the stages of its implementation;
• basics of organizing the work of a multidisciplinary rehabilitation team;
• principles of evidence-based medicine in the field of rehabilitation and modern scientific approaches to assessing the effectiveness of rehabilitation interventions;
• ethical and deontological aspects of the professional activities of a physical rehabilitation specialist.

Be able to:

• collect a patient's history and assess the patient's functional status;
• use standardized assessment tools (scales, tests, questionnaires);
• determine rehabilitation potential and formulate a functional diagnosis according to the International Classification of Functioning (ICF);
• draw up and justify an individual rehabilitation plan;
• select and apply adequate methods of physical rehabilitation taking into account the nosology, functional limitations and needs of the patient;
• organize and coordinate the work of a multidisciplinary team;
• maintain the necessary medical documentation, monitor the dynamics and correct the intervention plan;
• analyze scientific literature, critically evaluate the evidence base of rehabilitation methods and results;
• communicate with patients, their families and team members, adhering to the principles of a patient-centered approach.

3. CONTENT OF THE COURSE

Topic 1. Introduction to physical and rehabilitation medicine. History and current trends

- Introduction to physical and rehabilitation medicine: subject, tasks, place in the health care system.
- Biopsychosocial model of health and International Classification of Functioning (ICF).
- Regulatory and legal framework of rehabilitation in Ukraine and international documents of the United Nations (UN) conventions, standards of the World Health Organization (WHO), documents of the European Union (EU).
- Multidisciplinary and intersectoral interaction in the field of physical rehabilitation practice.
- Ethical and deontological principles of the work of a specialist in physical and rehabilitation medicine.

Topic 2. Regulatory and legal framework and organizational principles of rehabilitation in Ukraine and the world

- Legislative support for the rehabilitation system in Ukraine: the Constitution of Ukraine, the laws "On Rehabilitation in the Healthcare Sector", "On the Fundamentals of Social Protection of Persons with Disabilities", other regulatory acts.
- The role of the Ministry of Health, the National Health Service of Ukraine (NHSU) and local governments in the organization of rehabilitation care.
- International standards and recommendations: documents of the WHO, the European Union, the UN Convention on the Rights of Persons with Disabilities.
- Organizational models of physical and rehabilitation medicine: inpatient, outpatient, home and community-oriented rehabilitation.
- Ensuring continuity and continuity of rehabilitation services at different levels of care.

Topic 3. International Classification of Functioning (ICF) as the basis of physical rehabilitation

- Structure and main components of the ICF: functions and structures of the body, activity, participation, environmental factors.
- The concept of "life activity limitation" and "functioning impairment" in ICF terms.
- Using the ICF to establish a functional diagnosis.
- Coding according to the ICF: rules, levels of detail, examples of application.
- The role of the ICF in determining physical rehabilitation potential and forming an individual rehabilitation plan.
- Integration of the ICF into medical documentation and international practice of evidence-based physical and rehabilitation medicine

Topic 4. Biopsychosocial model of health and principles of organizing a multidisciplinary team

- The essence of the biopsychosocial model of health: integration of biological, psychological and social factors in the process of treatment and physical rehabilitation.
- Differences between the biopsychosocial model and the biomedical model; its significance in modern medicine.
- The place of the patient at the center of the physical rehabilitation process (patient-oriented approach).
- The concept of a multidisciplinary team: composition, functions, role of each specialist (physician, physical therapist, occupational therapist, speech therapist, psychologist, social worker, etc.).
- Organization of interaction in the team: distribution of responsibilities, interdisciplinary consultations, team meetings.
- Intersectoral cooperation (medicine - education - social sphere - community).
- Ethical and communicative aspects of working in a multidisciplinary team.

Topic 5. Methods of clinical and functional examination in physical and rehabilitation medicine.

- Collection of anamnesis and assessment of patient complaints taking into account the biopsychosocial model.
- Clinical examination: examination, palpation, assessment of tone, muscle strength, range of

motion.
- Use of instrumental and laboratory methods in the diagnosis of functional disorders.
- Standardized scales and questionnaires: VAS, FIM, Barthel Index, Rivermead Mobility Index, cognitive function assessment scales, etc.
- Assessment of activity and participation according to the ICF.
- Methods of determining physical rehabilitation potential and predicting results.
- Documentation of examination results and their use for the formation of an individual rehabilitation plan.

Topic 6. Pre-formulated physical factors in rehabilitation treatment and their application

- Classification of physical factors in physical rehabilitation (mechanical, thermal, electrical, magnetic, light, water).
- General principles of physiotherapeutic effects on the body.
- Electrotherapy: indications, contraindications, methods (galvanization, diadynamic therapy, electrostimulation).
- Magnetotherapy and laser therapy in physical and rehabilitation practice.
- Heat therapy (paraffin therapy, ozokerite, mud therapy) and cryotherapy.
- Hydrotherapy and balneotherapy: therapeutic baths, showers, swimming as a method of physical rehabilitation.
- Combination of physical factors with other methods of physical rehabilitation (kinesiotherapy, ergotherapy).
- Modern technologies of physiotherapy and requirements for the safety of their use.

Topic 7. Physical therapy: principles, methods and practical application

- The concept of physical therapy, its place in the system of physical and rehabilitation medicine and differences from related methods.
- Basic principles of physical therapy: individualization, gradualness, functional orientation, continuity and safety.
- Physical therapy methods: active and passive exercises, mobilization and stabilization of joints, stretching, strength and endurance training.
- Use of special techniques (PNF, Bobath, Brunnstrom, McKenzie, etc.).
- Application of physical therapy in different periods of rehabilitation: acute, subacute, restorative, supportive.
- Use of auxiliary equipment and technologies: mechanotherapy, robotic systems, virtual reality.
- Assessment of the effectiveness of physical therapy using standardized scales and tests.
- The role of the physical therapist in the multidisciplinary team and interaction with other specialists.

Topic 8. Occupational therapy: approaches to the recovery and social integration of patients

- The essence and tasks of occupational therapy in the structure of physical and rehabilitation medicine.
- Principles of occupational therapy: activity, functional orientation, orientation to the patient's needs, social integration.
- NSZU and instrumental activities (IADL).
- Functional training using simulation of everyday activities (cooking, dressing, using transport).
- Use of assistive and auxiliary technologies, orthoses, adaptive devices.
- Methods for the development of fine motor skills and cognitive functions in the process of occupational therapy.
- The role of occupational therapy in the restoration of professional and social participation of patients.
- Cooperation of the occupational therapist with the patient's family and the multidisciplinary team.

Topic 9. Speech and language therapy, psychological support in the structure of physical rehabilitation

- Speech disorders after nervous system lesions: aphasia, dysarthria, apraxia of speech, dysphagia.
- Basic principles of speech therapy in patients with neurological pathology.
- Methods and techniques for restoring speech: articulation exercises, exercises to expand vocabulary, development of communication skills.

- Cognitive rehabilitation: restoration of memory, attention, executive functions, thinking.
- Psychological consequences of diseases and injuries: anxiety, depression, post-traumatic stress disorder (PTSD), cognitive and behavioral changes.
- Tasks of psychological support in the system of physical rehabilitation.
- Main areas of psychotherapy in physical rehabilitation: cognitive-behavioral therapy, body-oriented techniques, art and music therapy.
- Working with the patient's motivation for recovery and forming an active position in the rehabilitation process.
- Features of psychotherapeutic care for patients with chronic pain and disabling conditions.
- Psychological support for the patient's family and prevention of emotional burnout of caregivers.

Topic 10. Physical rehabilitation in diseases of the nervous system (stroke, traumatic brain injury, spinal cord injury)

- General principles of neurological rehabilitation: early onset, intensity, multidisciplinary, continuity and individualization.
- Physical rehabilitation after stroke:
• stages (acute, subacute, restorative, long-term);
• restoration of motor, speech, cognitive and everyday functions;
• use of physical therapy, occupational therapy, speech therapy, psychological support.
- Physical rehabilitation in traumatic brain injury (TBI):
• Features of restoration of cognitive, behavioral and emotional functions;
• Combination of physical and cognitive therapy;
• work with family and social integration.
- Physical rehabilitation for spinal cord injuries:
• Restoration of motor activity, prevention of contractures and bedsores;
• Application of mechanotherapy, robotic systems, virtual reality;
• Formation of self-care and mobility skills using assistive technologies.
- Assessment of the results of physical rehabilitation for neurological diseases (FIM, Barthel, Ashworth, Rivermead Mobility Index scales, etc.).

Topic 11. Physical rehabilitation in diseases and injuries of the musculoskeletal system

- General principles of physical rehabilitation in pathologies and injuries of the musculoskeletal system: early onset, individualization, gradualness, multidisciplinary approach.
- Physical rehabilitation after fractures and surgical interventions (osteosynthesis, endoprosthetics): restoration of mobility, prevention of contractures, muscle strength training.
- Features of physical rehabilitation in amputations: stump care, prosthetics, formation of skills in using a prosthesis, social adaptation.
- Recovery in degenerative-dystrophic diseases (arthrosis, osteochondrosis, scoliosis): kinesiotherapy, physical factors, occupational therapy approaches.
- Physical rehabilitation for sports injuries: ligament, tendon, muscle injuries, post-operative conditions.
- Use of orthoses, assistive devices, mechanotherapy and modern robotic devices.
- Functional training with restoration of self-care skills and professional activity.

Topic 12. Features of physical rehabilitation in people of different ages. Pediatric and geriatric physical rehabilitation

- General principles of pediatric and geriatric physical rehabilitation: individualization, multidisciplinary approach, participation of family and social services.
- Pediatric physical rehabilitation:

- Features of the development of the child's body and their importance for recovery;
- Physical rehabilitation of children with cerebral palsy, congenital defects of the musculoskeletal system and nervous system;
- Formation of daily activity skills, socialization and inclusion in the educational environment.
- Geriatric physical rehabilitation:
- Age-related features of functioning and needs of elderly patients;
- Prevention of falls, restoration of mobility, support of cognitive functions;
- physical rehabilitation in polymorbidity and age-related frailty.

- Use of physical therapy, occupational therapy, speech therapy and psychological support in children and the elderly.
- The role of multisensory environments, VR technology in pediatric and geriatric physical rehabilitation.
- Collaboration with family, caregivers and inter-sectoral interaction (medicine - education - social sphere - community).
- Ethical aspects of working with children and the elderly.

Topic 13. Assistive technologies and technical means of physical rehabilitation

- The concept of assistive technologies (AT): definition, classification and role in the physical rehabilitation system.
- The main groups of technical means of physical rehabilitation:
- for mobility (crutches, walkers, wheelchairs, exoskeletons);
- for self-service (adapted devices, orthoses, prostheses);
- for communication (means of alternative and additional communication, special software products, gadgets);
- for orientation in space and sensory compensation (technical means for people with hearing and vision impairments).
- The use of modern digital technologies: telerehabilitation, mobile applications, "smart home" systems.
- Prosthetics and orthotics: modern trends and approaches to selection.
- Principles of adapting the living and working environment for people with disabilities.
- Organization of care for patients with hypertension in Ukraine: legislative and social mechanisms.
- Ethical and practical aspects of the use of assistive technologies: autonomy, safety, accessibility.

Topic 14. Monitoring the effectiveness of physical rehabilitation and the evidence base in PRM

- Indicators and criteria for assessing the effectiveness of rehabilitation programs.
- Use of standardized tools (FIM scales, Barthel Index, SF-36, WHOQOL-BREF, etc.).
- Methods of functional diagnostics and reassessment of the patient's condition.
- Documentation of results: individual rehabilitation plan, diaries, control charts.
- Principles of evidence-based medicine in physical rehabilitation.
- Analysis of scientific data and clinical studies for the implementation of effective rehabilitation methods.
- Use of information systems and digital technologies for monitoring processes in physical and rehabilitation medicine.

4. STRUCTURE OF THE ACADEMIC DISCIPLINE

Topic names	**Number of hours**					
	Total	Including				
		lectures	seminar	practical	laboratory	Independent work
Topic 1. Introduction to physical and rehabilitation medicine. History and current trends.	12	2	0	2	0	8
Topic 2. Regulatory and legal framework and organizational principles of rehabilitation in Ukraine	8	0	0	2	0	6

and the world						
Topic 3. International Classification of Functioning (ICF) as the basis of physical rehabilitation practice	6	2	0	4	0	0
Topic 4. Biopsychosocial model of health and principles of a multidisciplinary team	8	0	0	2	0	6
Topic 5. Methods of clinical and functional examination in physical rehabilitation	10	2	0	2	0	6
Topic 6. Physical factors in rehabilitation treatment and their application	8	2	0	2	0	4
Topic 7. Physical therapy: principles, methods and practical application	4	2	0	2	0	0
Topic 8. Occupational therapy: approaches to recovery and social integration of patients	6	2	0	4	0	0
Topic 9. Speech and language therapy, psychological support in the structure of physical rehabilitation	4	2	0	2	0	0
Topic 10. Physical rehabilitation in diseases of the nervous system (stroke, traumatic brain injury, spinal cord injury)	4	0	0	4	0	0
Topic 11. Physical rehabilitation for diseases and injuries of the musculoskeletal system	2	0	0	2	0	0
Topic 12. Features of physical rehabilitation in people of different ages. Pediatric and geriatric physical rehabilitation	2	0	0	2	0	0
Topic 13. Assistive technologies and technical means of physical rehabilitation	4	2	0	2	0	0
Topic 14. Monitoring the effectiveness of physical rehabilitation and the evidence base in physical rehabilitation	12	0	0	2	0	10
Total hours	**90**	**16**	**0**	**34**	**0**	**40**

5. TOPICS OF LECTURES / SEMINARS / PRACTICAL / LABORATORY CLASSES

5.1. Topics of lecture classes

Topic name	Number of hours
Lecture 1. Introduction to physical and rehabilitation medicine	2
Lecture 2. Regulatory and legal framework and organizational principles of rehabilitation in Ukraine and the world	2
Lecture 3. Methods of clinical and functional examination in physical rehabilitation	2
Lecture 4. Physical factors in rehabilitation treatment	2
Lecture 5. Physical therapy and occupational therapy	2
Lecture 6. Speech therapy and psychological support in the structure of physical rehabilitation	2
Lecture 7. Physical rehabilitation for neurological and orthopedic lesions	2
Lecture 8. Special directions and evidence base in physical rehabilitation	2
Total	16

5.2. Topics of seminar classes

Seminars are not provided.

5.3. Topics of practical classes

Topic name	Number of hours
Topic 1. Introduction to physical rehabilitation: subject, tasks, modern trends.	2
Topic 2. Regulatory and legal framework and organizational principles of rehabilitation in Ukraine and the world	2
Topic 3. International Classification of Functioning (ICF) as a basis in physical rehabilitation practice	2
Topic 3. Practical application of ICF in the formation of a functional diagnosis.	2
Topic 4. Biopsychosocial model of health and principles of a multidisciplinary team	2
Topic 5. Methods of clinical examination of a patient in physical rehabilitation.	2
Topic 6. Physical factors in rehabilitation treatment: electrotherapy, magnetotherapy, heat therapy, cryotherapy, hydrotherapy, combined methods.	2
Topic 7. Physical therapy: principles, methods and practical application	2
Topic 8. Occupational therapy: restoration of ADL and IADL, work with household skills.	4
Topic 9. Speech and language therapy: methods for correcting speech disorders.	2
Topic 10. Physical rehabilitation in stroke: stages and multidisciplinary approach.	2
Topic 10. Physical rehabilitation in traumatic brain injuries and spinal cord injuries: cognitive and behavioral aspects.	2
Topic 11. Physical rehabilitation for diseases and injuries of the musculoskeletal system	2
Topic 12. Features of physical rehabilitation in people of different ages. Pediatric and geriatric physical rehabilitation	2
Topic 13. Assistive technologies and technical means of physical rehabilitation	2
Topic 14. Monitoring the effectiveness of physical rehabilitation and the evidence base in physical rehabilitation	2
Total	34

5.4. Topics of laboratory classes

Laboratory classes are not provided.

6. INDEPENDENT WORK OF A HIGHER EDUCATION STUDENT

Topic name	Number of hours
Topic 1. Abstract: History of development of physical rehabilitation: analysis of foreign and Ukrainian schools, modern trends	8
Topic 2. Abstract: Regulatory and legal framework of physical rehabilitation: study of the Law of Ukraine "On rehabilitation in the sphere of health care", international documents (UN Convention, WHO recommendations, EU documents).	6
Topic 4. Report: Biopsychosocial model of health: preparation of a comparative characteristic of the differences from the biomedical model and its significance in physical rehabilitation	6
Topic 5. Abstract: Review of standardized scales and tests: preparation of a table of characteristics (Barthel Index, FIM, Rivermead, Ashworth, VAS, etc.)	6
Topic 6. Abstract: Physical factors in physical rehabilitation: preparation of a comparative characteristic of the main methods (electrotherapy, heat therapy, cryotherapy, hydrotherapy)	4
Topic 14. Abstract: Monitoring the effectiveness of physical rehabilitation and the evidence base in physical rehabilitation	10
TOTAL	**40**

7. FORMS AND METHODS OF TEACHING

Forms of teaching:
The discipline is taught in the form of lectures, seminars, and practical classes, as well as the organization of the applicant's independent work.
Teaching methods:
Lecture classes: lecture-conversation, lecture-visualization, lecture-discussion, lecture with elements of the case method
Practical classes: conversation, role-playing games, solving clinical situational problems, practicing patient examination skills, solving situational problems, educational discussions and brainstorming, and working in small groups.
Independent work: independent work with the textbook, independent work with the recommended basic and additional literature, with electronic information resources, and independent solution of clinical problems.

8. Forms of control and assessment methods (including criteria for evaluating learning outcomes)

Current control: oral survey, testing, evaluation of performance of practical skills, evaluation of communication skills during role-play, solution of situational clinical tasks, evaluation of activity in class.

Final control: testing, grading.

Evaluation of the current educational activity in a practical session:

1. Evaluation of theoretical knowledge on the subject of the lesson:

- methods: survey, solving a situational problem
- maximum score – 5, minimum score – 3, unsatisfactory score – 2.

2. Evaluation of practical skills and manipulations on the subject of the lesson:

- methods: assessment of the correctness of the performance of practical skills
- maximum score – 5, minimum score – 3, unsatisfactory score – 2.

The grade for one practical lesson is the arithmetic average of all components and can only have a whole value (5, 4, 3, 2), which is rounded according to the statistical method.

Current evaluation criteria in practical training

Assessment	Criteria for the assessment
«5»	The applicant worked systematically during the semester, showed versatile and deep knowledge of the program material, is able to successfully perform the tasks assigned by the program, has mastered the content of basic and additional literature, has realized the relationship of individual sections of the discipline, their importance for the future profession, has revealed creative abilities in the use of educational and program material, showed the ability to independent updating and replenishment of knowledge.
«4»	The applicant revealed full knowledge of the curriculum material, successfully performed the tasks provided by the program, absorbed the basic literature recommended by the program, showed a sufficient level of knowledge in the discipline and is able to independently update and update them during further training and professional activities.
«3»	The applicant has identified knowledge of the basic curriculum material to the extent necessary for further training and subsequent work in the profession, copes with the tasks provided by the program, made some mistakes in the answers to the exam and in the performance of test tasks, but has the necessary knowledge to overcome the mistakes made under the guidance of a scientific and pedagogical worker.
«2»	The applicant did not identify sufficient knowledge of the basic curriculum material, made fundamental errors in the performance of the tasks provided by the program, cannot use the knowledge without the help of the teacher in further training, could not master the skills of independent work.

A credit is awarded to a student who has completed all the tasks of the course syllabus, actively participated in seminars, completed and defended an individual assignment, and has a current average grade of at least 3.0 and no academic debt.

The credit is awarded: at the last class before the start of the exam session - in the case of a linear learning system, at the last class - in the case of a cyclical learning system. The credit grade is the arithmetic mean of all components on the traditional four-point scale and is rounded to two decimal places using the statistical method.

9. DISTRIBUTION OF SCORE AWARDS FOR HIGHER EDUCATION STUDENTS

Grades in academic disciplines for applicants who have successfully completed the program are converted to a traditional four-point scale according to the absolute criteria listed in the table:

Table of conversion of traditional assessment into multi-point

National assessment of the discipline	The amount of points for the discipline
Excellent ("5")	185 – 200
Good ("4")	151 – 184
Satisfactory ("3")	120 – 150
Unsatisfactory ("2")	Below 120

A multi-point scale (200-point scale) characterizes the actual academic performance of each student in mastering the academic discipline. The conversion of traditional grades to a 200-point scale is performed by the University's IT department using the Kontingent program according to the following formula: Average grade (current grade in the discipline) x 40.

The ECTS rating scale is used to evaluate the achievements of students in an academic discipline who are studying in the same course of the same specialty, according to the points they have received, by ranking them as follows:

Conversion of the traditional discipline grade and the sum of the ECTS scale scores

Assessment on the ECTS scale	Statistical indicator
A	The best 10% of the student
B	The next 25% of the student
C	The next 30% of the student
D	The next 25% of the student
E	The next 10% of the student

The ECTS scale determines whether an applicant belongs to the group of the best or worst among a reference group of classmates (faculty, specialty), i.e., their rating. When converting from a multi-point scale, the boundaries of grades “A”, “B”, “C”, “D”, “E” do not usually coincide with the boundaries of grades “5”, ‘4’, “3” on the traditional scale. A grade of “A” on the ECTS scale cannot be equal to a grade of “excellent,” and a grade of “B” cannot be equal to a grade of “good,” etc. Applicants who have received grades of “FX” and ‘F’ (“2”) are not included in the list of ranked applicants. Such applicants automatically receive a grade of “E” after retaking the exam. A grade of “FX” is given to applicants who have earned the minimum number of points for their current academic performance but who have not passed the final exam. The grade “F” is given to students who have attended all classroom sessions of the academic discipline but have not achieved an average score (3.00) for their current academic performance and are not admitted to the final assessment.

10. METHODICAL SUPPORT

- Syllabus of the academic discipline
- Curriculum of the academic discipline
- Methodological recommendations for practical classes
- Methodological recommendations for independent work of higher education applicants
- Multimedia presentations
- Illustrative materials
- Clinical case studies

11. QUESTIONS FOR PREPARATION FOR THE FINAL TEST

1. Subject and tasks of physical and rehabilitation medicine.
2. History of development and modern trends of physical rehabilitation in Ukraine and the world.
3. Biopsychosocial model of health: essence and difference from biomedical.
4. The role of a multidisciplinary team in rehabilitation.
5. Ethical and deontological principles of the work of a rehabilitation specialist.
6. Legislative framework of Ukraine in the field of rehabilitation.
7. Main international documents (UN Convention, WHO, EU documents) on the rights of persons with disabilities.
8. Organizational models of rehabilitation care: inpatient, outpatient, home, community-oriented.
9. The role of the Ministry of Health, the National Health Service of Ukraine and local governments in the organization of physical and rehabilitation medicine.
10. Standardization and documentation of rehabilitation interventions in Ukraine.

11. Structure of the International Classification of Functioning (ICF).
12. Basic concepts of ICF: functions, activity, participation, environmental factors.
13. Principles of ICF coding.
14. Using the ICF to formulate a functional diagnosis.
15. The value of the ICF in drawing up an individual rehabilitation plan.
16. Methods of clinical examination in physical rehabilitation.
17. Assessment of muscle tone and strength.
18. Determination of the volume of movements in the joints.
19. Standardized scales and tests (BarthelIndex, FIM, VAS, etc.).
20. The concept of "rehabilitation potential".
21. Classification of physical factors.
22. Electrotherapy: methods, indications, contraindications.
23. Magnetotherapy and laser therapy: mechanisms of action and clinical application.
24. Heat therapy and cryotherapy: principles of use in rehabilitation.
25. Hydrotherapy and balneotherapy.
26. Basic principles of physical therapy.
27. Physical therapy methods: active and passive exercises.
28. Mechanotherapy and the use of exercise machines.
29. Modern physical therapy methods: PNF, Bobath, McKenzie.
30. Kinesiotaping in physical rehabilitation practice.
31. The essence and tasks of occupational therapy.
32. Restoration of daily living skills (ADL, IADL).
33. Functional training with imitation of everyday activities.
34. Use of orthoses and adaptive devices in occupational therapy.
35. The role of an occupational therapist in a multidisciplinary team.
36. Speech disorders after lesions of the nervous system.
37. Methods of speech therapy.
38. Cognitive rehabilitation: restoration of memory, attention, thinking.
39. Psychological consequences of serious illnesses and injuries.
40. Basic methods of psychological support in rehabilitation practice.
41. Principles of rehabilitation after stroke.
42. Rehabilitation for traumatic brain injury.
43. Rehabilitation for spinal cord injuries.
44. Rehabilitation after fractures and endoprosthetics.
46. Rehabilitation in degenerative diseases of the musculoskeletal system.
47. Peculiarities of pediatric rehabilitation.
48. Peculiarities of geriatric rehabilitation.
49. Prevention of falls in elderly patients.
50. Use of multisensory environments in rehabilitation.
51. Classification of assistive technologies.
52. Prosthetics and orthotics: current trends.
53. Telerehabilitation and digital technologies in physical therapy.
54. Methods of monitoring the effectiveness of rehabilitation.
55. Evidence base in physical rehabilitation: principles and current research.

12. RECOMMENDED READING

Main:

1. European Physical and Rehabilitation Medicine Bodies Alliance. White Book on Physical and Rehabilitation Medicine in Europe. Eur J Phys. Rehabil. Med 2018. - Vol.54(2). – P.125-321.
2. EuropeanUnionofMedicalSpecialists (UEMS) SectionofPhysical&RehabilitationMedicine: A positionpaperonphysicalandrehabilitationmedicineinacutesettings./ Ward A., Gutenbrunner C., Damjan H., Giustini A., Delarque A. // J RehabilMed. – 2022 (42): P.417–424.

3. DeLisa's. PhysicalMedicineandRehabilitation / DeLisa's. – LippincottWilliams&Wilkins; Fifth, NorthAm, 2019. – 2432 p.

Additional:

1. Gutenbrunner C., Tederko P., Grabljevec K., Nugraha B. Responding to the World Health Organization Global Disability Action Plan in Ukraine: developing a National Disability, HealthandRehabilitationPlan J RehabilMed. – 2018 (50). – P.338–341
2. WorldHealthOrganization. Rehabilitation 2030: a callforaction: Meetingreport [Internet]. WHO; 2017. Availablefrom: http://www.who.int/disabilities/care/rehab-2030/en/
3. WHO WHOglobaldisabilityactionplan 2014-2021 [Internet]. WHO. [cited 2014 Oct 21]. Availablefrom: http://www.who.int/disabilities/actionplan/en/
4. WHO WorldReportonDisability [Internet]. WHO. [cited 2014 Nov 8]. Availablefrom: http://www.who.int/disabilities/world_report/2011/en/

13. ELECTRONIC INFORMATION RESOURCES

1. https://moz.gov.ua/en– Official website of the Ministry of Health of Ukraine.
2. https://www.president.gov.ua/en - Decree of the President of Ukraine "On intensification of work on ensuring the rights of people with disabilities"
3. https://zakon.rada.gov.ua/laws/show/2801-12?lang=en#Text - Law of Ukraine "Fundamentals of the Legislation of Ukraine on Health Care"
4. zakon.rada.gov.ua/laws/show/2961-15?lang=en - Law of Ukraine "On Rehabilitation of Persons with Disabilities in Ukraine"
7. http://www.nbuv.gov.ua - National Library of Ukraine named after V.I. Vernadsky.
9. https://library.gov.ua/about-the-library - National Scientific Medical Library of Ukraine.
10. https://bestpractice.bmj.com/info British Medical Journal online platform