**MINISTRY OF HEALTH OF UKRAINE**

**KHARKIV NATIONAL MEDICAL UNIVERSITY**

II medical faculty

Department of sports, physical and rehabilitation medicine, physical therapy, occupational therapy

Area of knowledge 22 "Health care"

Specialty 222 "Medicine"

Educational-professional program Medicine of the second (master's) level of higher education

SYLLABUS

ACADEMIC DISCIPLINE

**"medical rehabilitation"**

|  |  |  |
| --- | --- | --- |
| The syllabus of the discipline was approved at a meeting of the department of sports, physical and rehabilitation medicine,physical therapy, occupational therapy  Protocol from "01" September 2020 № 1  Head of Department\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ A.G. Istomin   "01" 2020 September |   | Approved by the methodical commission of KhNMU on problems of therapeutic profile    Protocol from. "28" October 2020 № 2 Head \_\_\_\_\_\_\_\_\_\_\_\_ P.G. Kravchun  "28" 2020 October |

**medical rehabilitation**

Syllabus developers:

Istomin A.G. Head of the department of physical rehabilitation and sports medicine with a course of physical education and health, doctor of medical sciences, professor;

Latoguz S.I. Associate Professor of physical rehabilitation and sports medicine with a course of physical education and health, Ph.D;

Rezunenko O.V. Associate professor of physical rehabilitation and sports medicine with a course of physical education and health, Ph.D.

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| Surname, patronymic of the teacher | Rezunenko Olga Vasilivna |
| Information about the teacher | Professional interests: physical rehabilitation, sports medicine, therapeutic massage, occupational therapy Teacher profile  http://31.128.79.157:8083/user/profile.php?id=1404 |
| Contact phone | +380 991850327 |
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| Information about the consultation :face-to-face consultationsschedule : venue : online consultations  |    Tuesday from 13.00 to 15.00Thursday from 13.00 to 15.00University Clinic of KhNMU, street Alexander Speyer, 4 by prior arrangement  http://31.128.79.157:8083/user/profile.php?id=1404 |
| Location | street Alexander Speyer, 4 |

**Information about the discipline**

**1. Description of the discipline**

Course - VI

Specific semester / academic year - autumn /

Scope of the discipline (in ECTS credits with determination of the distribution of hours for lectures, practical classes, seminars, VTS): total number of credits - 3, practical classes - 20 hours, VTS - 100 hours.

General characteristics of the discipline.

**Medical rehabilitation**

As an independent branch of medical knowledge, it studies the scientifically sound foundations of the rational use of means and methods of physical culture and other physical factors to restore health, efficiency and quality of life, which were impaired by disease, injury or other damage. The purpose of studying the discipline is for students to acquire knowledge about the means of the most effective and early return of patients and the disabled to domestic and work processes.

At the present stage in the system of medical rehabilitation of patients a significant place belongs to one of the most important means of rehabilitation - therapeutic physical culture. Therapeutic physical culture is a method of active, functional, pathogenetic and training therapy and reflects the principles of active rehabilitation, which is in full accordance with the rehabilitation direction in modern clinical medicine. Underestimation of this method often leads to an increase in the duration of treatment and the emergence of various functional disorders or more serious complications and sometimes to disability. Modern health care practice involves the use of rehabilitation at all stages of treatment (hospital, outpatient department, spa treatment). Medical rehabilitation is carried out taking into account the succession of stages of rehabilitation and combination with physiotherapy, chiropractic, acupuncture and other treatments in rehabilitation departments, vocational rehabilitation centers and combined (medical and vocational) rehabilitation centers. This scheme is in line with the developments of the WHO Expert Committee on Rehabilitation, as well as international ideas about the construction of rehabilitation centers in various areas.

**The subject**of the discipline is the formation of students' adequate ideas about their future activities, the peculiarities of the profession and the requirements that will be presented to future professionals with higher education. Medical universities should train well-developed specialists who would have theoretical knowledge and practical skills and abilities to use medical rehabilitation in their treatment and prevention work.

Link to the video annotation of the discipline (if available) - .

Discipline page in Moodle system (if available) : -.

**2 . The purpose and objectives of the discipline :**

The purpose of teaching the discipline is to provide students with knowledge about the means of the most effective and early return of patients and the disabled to domestic and work processes.

The main tasks of studying the discipline " Medical Rehabilitation" are :

- study of the definition of "rehabilitation", "rehabilitation".

- study of the main purpose of rehabilitation in medicine.

- study of medical rehabilitation, its tasks and components, state institutions and public organizations involved in medical rehabilitation.

- study of the main tasks of medical control.

**3. Discipline status**( selective ) and **discipline format**: ***mixed***.

**4. The method of teaching**:

1. Verbal method.

2. Visual method.

3. Computer method.

4. Independent work with literary sources.

**5. Recommended reading :**

1. Лечебная физическая культура: Справочник /Под ред. В.А. Епифанова. - 2-е изд. перераб. и доп. – М: Медицина, 2001. – 592 с.

2. Лечебная физкультура в системе медицинской реабилитации: Руководство для врачей / Под ред. А.Ф. Каптелина, И.П. Лебедевой – М.: Медицина, 1995. – 400 с.

3. Лікувальна фізична культура. Підручник /В.С. Соколовський, Н.О. Романова, О.П. Юшковська. – Одесса: Одес. держ. мед. ун-т, 2005. – 234 с.

4. Мухін В.М. Фізична реабілітація. – Видання друге, перероблене та доповнене. – Київ: Олімпійська література, 2005. – 248 с.

5. Основи реабілітації, фізіотерапії, лікувальної фізичної культури і масажу / За ред. В.В. Клапчука, О.С. Полянської. – Чернівці: Прут, 2006. – 208 с.

6. Реабилитация кардиологических больных /Под ред. К. В. Лядова, В.Н. Преображенского. – М.: ГЭОТАР-Медио, 2005. – 288 с.

7. Sports Injury Prevention and Rehabilitation : Integrating Medicine and Science for Performance Solutions. Edited by David Joyce, Daniel Lewindon - Taylor & Francis Ltd, 2016. – 452 p.

8. Neurological Rehabilitation: Optimizing motor performance. By (author) Janet H. Carr, Roberta B. Shepherd. - Elsevier Health Sciences, 2010. – 376 p.

**6. Prerequisites and co-requisites of the discipline**

Medical rehabilitation as a discipline is based on the study of human anatomy, medical biology, medical chemistry, medical and biological physics, physiology, pathophysiology, hygiene and ecology, pharmacology, propaedeutic of internal medicine, propaedeutic of pediatrics and integrates with these disciplines; provides consistency and interconnection with internal medicine, surgery, traumatology and orthopedics, neurology, pediatrics, obstetrics and gynecology and other subjects of the curriculum, which provides for the integration of teaching with these disciplines.

**7. Learning outcomes**

*As a result of studying the discipline the student must*

**Know:**

- key concepts of medical rehabilitation as a clinical discipline.

**Be able:**

- to examine the patient in rehabilitation departments;

- make a set of exercises depending on the disease and the degree of loss of functional ability;

- conduct physical therapy classes with the patient;

- massage;

- to carry out sanitary-educational work in the rehabilitation department and with individual patients, their environment;

- keep approved medical records.

**The content of the discipline**

|  |  |
| --- | --- |
| **Names of sections of the discipline and topics** | **Number of hours** |
| **Form of study (day or evening)** |
| **total** | **Including** |
| **cure** | **ave** | **lab** | **ind** | **cf.** |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| **Discipline section 1. Therapeutic physical culture. Methods of therapeutic physical culture for various diseases** |
| Topic 1 . Fundamentals of therapeutic physical culture. Means and forms. Exercise complexes | 30 | - | 5 | - | - | 25 |
| Topic 2 . Therapeutic massage. Basic and auxiliary techniques. | 30 | - | 5 | - | - | 25 |
| Topic 3 . Psychological, professional, pedagogical, social rehabilitation. | 30 | - | 5 | - | - | 25 |
| Topic 4. Medical rehabilitation of a patient of therapeutic, surgical, neurological profile. | 30 | - | 5 | - | - | 25 |
| **Total hours of discipline** | 120 | - | 20  |   |   | 100  |

**Topics of practical classes**

|  |  |  |
| --- | --- | --- |
| **№ s / n** | **Topic** | **Number of hours** |
| **Discipline section 2. Physical rehabilitation.** |
| 1. | Fundamentals of therapeutic physical culture. Means and forms. Exercise complexes | 5 |
| 2. | Therapeutic massage. Basic and auxiliary techniques. | 5 |
| 3. | Psychological, professional, pedagogical, social rehabilitation. | 5 |
| 4. | Medical rehabilitation of a patient of therapeutic, surgical, neurological profile. | 5 |
| **Total hours of practical training** | **20** |

**Individual work**

|  |  |  |
| --- | --- | --- |
| **№ s / n** | **Topic** | **Number of hours** |
| 1. | Fundamentals of therapeutic physical culture. Means and forms. Exercise complexes | 25 |
| 2. | Therapeutic massage. Basic and auxiliary techniques. | 25 |
| 3. | Psychological, professional, pedagogical, social rehabilitation. | 25 |
| 4. | Medical rehabilitation of a patient of therapeutic, surgical, neurological profile. | 25 |
| **Total hours of independent student work** | **120** |

**Discipline policy and values**

Discipline requirements.

Written and homework should be done in full and on time if the student.

During the lecture, students are recommended to keep a synopsis of the lesson and keep a sufficient level of silence. Asking questions to the lecturer is perfectly normal.

Practical training

Active participation during the discussion in the audience, students should be ready to understand the material in detail, ask questions, express their point of view, discuss. During the discussion it is important:

- respect for colleagues,

- tolerance for others and their experience,

- receptivity and impartiality,

- the ability to disagree with the opinion, but to respect the identity of the opponent (s),

- careful argumentation of his opinion and the courage to change his position under the influence of evidence,

- self-expression, when a person avoids unnecessary generalizations, describes his feelings and formulates his wishes based on their own thoughts and emotions,

- obligatory acquaintance with primary sources.

A creative approach in its various manifestations is welcome. Students are expected to be interested in participating in city, national and international conferences, competitions and other events in the subject profile.

Class attendance and behavior.

It is expected that students will attend all lectures and practical classes. If they missed classes, it is necessary to work it out (according to the schedule on the information stand of the department) .

It is important for students to follow the rules of good behavior at the university. These rules are common to all, they also apply to all faculty and staff, and are not fundamentally different from the generally accepted norms.

**During classes it is allowed:**

- leave the audience for a short time if necessary and with the permission of the teacher;

- drink soft drinks;

- take photos of presentation slides;

- take an active part in the class.

**forbidden:**

- eat (except for persons whose special medical condition requires another - in this case, medical confirmation is required);

- smoking, drinking alcohol and even low-alcohol beverages or drugs;

- use obscene language or use words that offend the honor and dignity of colleagues and faculty;

- gambling;

- damage the material and technical base of the university (damage inventory, equipment; furniture, walls, floors, litter the premises and territories);

- shouting, shouting or listening to loud music in classrooms and even in corridors during classes.

Use of electronic gadgets .

The use of electronic gadgets is the main and powerful source of information for studying the course, adaptable to modern requirements and promotes entry into modern and European educational space. Gadgets provide constant feedback: "teacher-student", "student-student ", "student-group of students".

Academic Integrity Policy .

The Department of Physical Rehabilitation and Sports Medicine with a course in physical education and health maintains zero tolerance for plagiarism. Male and female students are expected to constantly raise their awareness of academic writing. The first lessons will provide information on what to consider plagiarism and how to properly conduct research and scientific research .

Policy for people with special educational needs .

The university has created conditions for the opportunity to receive educational services for citizens with special educational needs, for access to the premises, equipment, ramps, support is provided order dated 22.06.2018 № 203 On approval of the Procedure for accompanying (providing assistance) to persons with disabilities, elderly people, other low-mobility groups during their stay on the territory (premises) of KhNMU.

Recommendations for successful completion of the discipline (activity of higher education students during practical classes, completion of the required minimum of educational work ).

During the study of the discipline the student is obliged to:

- systematically attend practical classes and lectures;

- keep notes of practical classes;

- take an active part in work in the classroom;

- perform semester assignments.

Incentives and penalties .

Additional points for achievements in scientific, scientific-technical, social and sports activities are awarded to the student for such achievements in the semester .

Safety precautions .

The first lesson of the course will explain the basic principles of labor protection by conducting appropriate training. It is expected that everyone should know where the nearest evacuation exit is, where the fire extinguisher is, how to use it, and so on.

The order of information on changes in the Syllabus and others .

The syllabus of the discipline must be updated annually in all components, except for the mission (goals) and program learning outcomes.

The basis for updating the syllabus may be:

- initiative and proposals of the guarantor of the educational program and / or teachers of the discipline;

- initiative of applicants for higher education by applying to the guarantor of the educational program;

- initiative of employers;

- results of assessment of students' knowledge of the discipline;

- objective changes of infrastructural, personnel nature and / or other resource conditions of syllabus realization;

- the results of the obligatory survey of students about the impressions from the study of the initial discipline.

**Evaluation policy**

Assessment system and requirements (types of control, control methods, forms of control, criteria for assessing the level of knowledge, conditions of admission to the final control )

When studying the discipline, the current and final semester control is used. Also, there is a mandatory control of the assimilation of educational material of the discipline, attributed to independent work.

**Current control**(mastering of certain topics) is carried out in the form of oral interviews, testing, conversations of students on pre-defined issues , in the form of speeches of higher education students with reports when discussing educational issues in practical classes.

In order to assess the independent work of students, an alternative option is offered *(optional)*: traditional types of tasks: writing a test, abstract or creative types: preparation of a multimedia presentation, the work of educational literature (annotation, review, citation, abstracts, lectures).

**The final semester control**in the discipline is a mandatory form of control of educational achievements of higher education. It is performed orally. The terms of the final semester control are set by the schedule of the educational process, and the amount of educational material, which is submitted for the final semester control, is determined by the work program of the discipline.

The final semester control is carried out after completion of the discipline in the form of credit:

- credit - is conducted by the teacher of the academic group at the last lesson in the discipline and involves taking into account the IPA and checking the mastery of all topics in the discipline. The assessment of the test (or transitional test) is determined in points from 120 to 200 and the mark of the test - "passed", "not credited".

**Evaluation of student success in ECTS organization of the educational process (credit)**

Recalculation of the average score for current activities in a multi-point scale

(for disciplines ending with a credit)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 4-point scale | 200-point scale |   | 4-point scale | 200-point scale |   | 4-point scale | 200-point scale |
| 5 | 200 | 4.22-4.23 | 169 | 3.45-3.46 | 138 |
| 4.97-4.99 | 199 | 4.19-4.21 | 168 | 3.42-3.44 | 137 |
| 4.95-4.96 | 198 | 4.17-4.18 | 167 | 3.4-3.41 | 136 |
| 4.92-4.94 | 197 | 4.14-4.16 | 166 | 3.37-3.39 | 135 |
| 4.9-4.91 | 196 | 4.12-4.13 | 165 | 3.35-3.36 | 134 |
| 4.87-4.89 | 195 | 4.09-4.11 | 164 | 3.32-3.34 | 133 |
| 4.85-4.86 | 194 | 4.07-4.08 | 163 | 3.3-3.31 | 132 |
| 4.82-4.84 | 193 | 4.04-4.06 | 162 | 3.27-3.29 | 131 |
| 4.8-4.81 | 192 | 4.02-4.03 | 161 | 3.25-3.26 | 130 |
| 4.77-4.79 | 191 | 3.99-4.01 | 160 | 3.22-3.24 | 129 |
| 4.75-4.76 | 190 | 3.97-3.98 | 159 | 3.2-3.21 | 128 |
| 4.72-4.74 | 189 | 3.94-3.96 | 158 | 3.17-3.19 | 127 |
| 4.7-4.71 | 188 | 3.92-3.93 | 157 | 3.15-3.16 | 126 |
| 4.67-4.69 | 187 | 3.89-3.91 | 156 | 3.12-3.14 | 125 |
| 4.65-4.66 | 186 | 3.87-3.88 | 155 | 3.1-3.11 | 124 |
| 4.62-4.64 | 185 | 3.84-3.86 | 154 | 3.07-3.09 | 123 |
| 4.6-4.61 | 184 | 3.82-3.83 | 153 | 3.05-3.06 | 122 |
| 4.57-4.59 | 183 | 3.79-3.81 | 152 | 3.02-3.04 | 121 |
| 4.54-4.56 | 182 | 3.77-3.78 | 151 | 3-3.01 | 120 |
| 4.52-4.53 | 181 | 3.74-3.76 | 150 | Less than 3 | Not enough |
| 4.5-4.51 | 180 | 3.72-3.73 | 149 |   |   |
| 4.47-4.49 | 179 | 3.7-3.71 | 148 |
| 4.45-4.46 | 178 | 3.67-3.69 | 147 |   |   |
| 4.42-4.44 | 177 | 3.65-3.66 | 146 |   |
| 4.4-4.41 | 176 | 3.62-3.64 | 145 |   |   |
| 4.37-4.39 | 175 | 3.6-3.61 | 144 |   |   |
| 4.35-4.36 | 174 | 3.57-3.59 | 143 |   |   |
| 4.32-4.34 | 173 | 3.55-3.56 | 142 |   |   |
| 4.3-4.31 | 172 | 3.52-3.54 | 141 |   |   |
| 4.27-4.29 | 171 | 3.5-3.51 | 140 |   |   |
| 4.24-4.26 | 170 | 3.47-3.49 | 139 |   |   |

Elimination of academic debt (working off).

Completion of missed classes for any reason is mandatory for all students, regardless of funding sources.

Classes that were missed for good reasons are practiced free of charge.

Missing classes within one month after their admission are carried out without the permission of the dean (deputy dean) and without payment, regardless of the reasons for admission, to the research and teaching staff of the department in free time daily, except Sunday.

Regardless of the reasons for absences, students are required to complete missed classes before the exam session, except in cases of providing an individual schedule in the manner prescribed by the University .

All types of classes (except for consultations) in which the student was not present for a good reason are subject to free practice;

Practice of practical classes is carried out by the next NPP of the department.

The mark on working off is entered by NPP of department in the journal of the account of working off of the missed employment (F.U-04). A positive assessment of the work is entered in the journal of the academic group (F. U-5.01.2.B).

Testing unsatisfactory grades received by the student in the classroom is mandatory. Testing of the unsatisfactory assessment received by the student at the current control is carried out free of charge .

Control questions, tasks for independent work

**Control questions:**

1. The concept of " medical rehabilitation". Means, forms and methods. Periods and stages of rehabilitation .

2. Exercise is the main means of physical rehabilitation. Mechanisms of therapeutic action of physical exercises. Classification of physical exercises.

3. Indications and contraindications to the appointment of therapeutic gymnastics.

4. Modes of motor activity. Indications for the appointment of motor modes at the inpatient, sanatorium and outpatient stages of rehabilitation, their tasks and content.

5. Basics of therapeutic massage. Equipment and sanitary and hygienic requirements for the massage room.

6. Types of massage. Indications and contraindications to the appointment of massage. Mechanisms of therapeutic effect of massage on the body.

7. Basic massage techniques.

8. Indications and contraindications to the appointment of physical rehabilitation for diseases of the cardiovascular system.

9. Tasks and features of the FR technique for myocardial infarction with a list of special exercises.

10. Tasks and features of the method of FR in coronary heart disease with a list of special exercises.

11. Tasks and features of the FR technique in hypertension and hypotension with a list of special exercises.

12. Indications and contraindications to the appointment of means of physical rehabilitation in bronchopulmonary pathology.

13. Tasks and features of FR in acute bronchitis and pneumonia with a list of special exercises.

14. Tasks and features of FR in chronic bronchitis, bronchial asthma and pleurisy with a list of special exercises.

15. Indications and contraindications to the appointment of FR in diseases of the digestive system.

16. Tasks and features of FR in chronic gastritis and duodenal ulcer with a list of special exercises.

17. Indications and contraindications to the appointment of FR in kidney disease and metabolic disorders. Features of FR techniques for obesity and diabetes.

18. Indications and contraindications to the appointment of physical rehabilitation in surgery.

19. Tasks and features of the FR technique in the preoperative and postoperative periods during surgical interventions on the abdominal organs, depending on the motor mode and the course of the postoperative period with a list of special exercises.

20. Tasks and features of the FR technique in the preoperative and postoperative periods during surgical interventions on the thoracic cavity, depending on the motor mode and the course of the postoperative period with a list of special exercises.

21. Indications and contraindications to the use of FR in injuries of the musculoskeletal system.

22. Tasks and methods of physical rehabilitation depending on the period (immobilization, post-immobilization, rehabilitation) and method of treatment. Justification of the choice of means and forms of FR.

23. Indications and contraindications to the use of FR in orthopedic disorders in children.

24. Features of the technique and special exercises for flat feet, posture disorders and scoliosis depending on its degree.

25. Features of the technique and special exercises for congenital muscular curvature of the neck, congenital dislocation of the thigh.

26. Indications and contraindications to the use of physical rehabilitation in neurological diseases.

27. Tasks and features of the FR technique in acute cerebrovascular accident (stroke), position therapy, special exercises.

28. Features of FR use in closed and open brain injuries.

29. Modern technologies of physical rehabilitation of patients with cerebral palsy.

30. Indications and contraindications to the use of physical rehabilitation for diseases and injuries of the peripheral nervous system.

31. Features of restorative-compensatory therapy for facial nerve neuritis, special physical exercises.

32. Some techniques of therapeutic gymnastics for neuritis of the ulnar and radial nerves, radiculitis.

33. Physical rehabilitation for traumatic spinal cord injuries.

34. Features of the method of using exercise for women with a normal pregnancy depending on the trimester.

35. Features of methods of application of physical exercises in childbirth and the postpartum period.

36. Indications and contraindications to the appointment of physical rehabilitation in gynecological practice.

37. Tasks and features of FR in chronic inflammatory diseases of the female genital organs, abnormalities of the uterus, menstrual disorders and functional urinary incontinence.

38. Features of physical education of infants.

39. Tasks and features of methods of therapeutic gymnastics in young children with acute pneumonia.

40. Tasks and features of the method of therapeutic gymnastics in young children with rickets and malnutrition.

**Tasks for independent work:**

1. Preparation of an abstract on topics for independent study.

2. Conducting an independent fragment of scientific research.

3. Search and development of educational and scientific-methodical resources on topics for independent study.

4. Preparation of a scientific report at a meeting of the scientific circle and / or scientific-student conference.

5. Participation in interuniversity and / or all-Ukrainian Olympiad in the discipline.

6. Preparation of scientific publications: abstracts from collections of scientific and practical conferences, collections of scientific papers, articles in professional scientific journals.

Rules for appealing the assessment

The student's appeal regarding the grade (number of points) received on the differentiated test in KhNMU must be submitted in person no later than the next working day after the announcement of the grade.

The appeal is considered no later than the next day after its submission in the presence of the student .

Additional questioning of the student when considering appeals is not allowed.

The procedure for filing and reviewing an appeal must be made public and communicated to the student no later than 7 days before the exams.

Head of the department, doctor of medicine, professor A.G. Istomin