**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

**"** **Urgent Problems of Physiotherapy, Health Resort Study and 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 KNMU on problems of therapeutic profile          Protocol from.  "28" October 2020 № 2    Head  \_\_\_\_\_\_\_\_\_\_\_\_ P.G. Kravchun    "28" 2020 October |

**Urgent Problems of Physiotherapy, Health Resort Study and 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;

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| --- | --- |
| Surname, patronymic of the teacher | Istomin A.G. |
| Contact phone | +380509845696 |
| E-mail: | ah.istomin@knmu.edu.ua |
| Information about the consultation :  face-to-face consultations  schedule :    venue :    online consultations | Tuesday from 13.00 to 15.00  Thursday from 13.00 to 15.00  University Clinic of KhNMU, street Alexander Speyer, 4 |
| Location | street Alexander Speyer, 4 |

**Information about the discipline**

**1. Description of the discipline**

Course - IV

Specific semester / academic year - autumn /

The amount of discipline (ECTS credits in the definition of the distribution of hours lectures, workshops, seminars, CPC): The total number of credits – 3: practical classes - 20 hours IWS - 70 hours.

**The role and place of discipline in the system of training**

General characteristics of the discipline

" Urgent Problems of Physiotherapy, Health Resort Study and Rehabilitation " as a discipline is based on the study of higher education in medical and biological physics, human anatomy, medical biology, medical chemistry, physiology, pathophysiology, hygiene and ecology, pharmacology, propaedeutics and internal medicine, with these disciplines; provides consistency and relationship 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 and the formation of skills to apply knowledge about the use of therapeutic physical factors in further education and in professional activity; teaches the use of therapeutic physical factors in medical practice to ensure the treatment and prevention of diseases, as well as for faster recovery, rehabilitation, improving the quality of life and efficiency in patients of various profiles; provides prevention of pre-pathological changes and pathological conditions.

Medical universities should train comprehensively developed specialists who would have theoretical knowledge and practical skills and abilities to apply various therapeutic physical factors (natural and preformed) at different stages of treatment and rehabilitation in their treatment and prevention work.

The subject of the discipline is the formation of applicants for higher education adequate ideas about the use of therapeutic physical factors at different stages of treatment and rehabilitation in the future activities of a specialist with higher education. Medical universities should train comprehensively developed specialists who would have theoretical knowledge, practical skills and abilities to apply various therapeutic physical factors in outpatient, outpatient and sanatorium conditions.

Interdisciplinary links: The discipline " Modern issues physiotherapy, balneology and rehabilitation " is studied in a series of disciplines of professionally oriented training, corresponding to the structural and logical scheme of the curriculum and based on disciplines: human anatomy, human physiology, valeology, physical therapy medical rehabilitation, reflexology.

Link to video annotation course not

There is no discipline page in the Moodle system

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

The purpose of teaching the discipline " Urgent Problems of Physiotherapy, Health Resort Study and Rehabilitation" is to form in higher education students an idea of ​​the system of knowledge about the mechanisms of action of therapeutic physical factors, indications and contraindications, rules for their appointment in various diseases, higher education students physical factors at different stages of treatment and rehabilitation for the most effective and early return of patients and people with disabilities to domestic and work processes.

The ultimate goal of the discipline "Urgent Problems of Physiotherapy, Health Resort Study and Rehabilitation" follows from the purpose of educational and professional training of graduates of higher medical education and is determined by the content of theoretical knowledge, methodological training, practical skills and abilities that must be mastered by higher education:

The main tasks of studying the discipline:

- formation of knowledge on the theoretical foundations of the use of therapeutic physical factors , the current state of physiotherapy, balneology and rehabilitation in Ukraine and abroad;

- mastering the essence, content, principles of prescribing therapeutic physical factors;

- mastering the methods and techniques of application of therapeutic physical factors;

- acquisition of knowledge regarding safety and acquisition of practical skills when working with basic physiotherapy equipment;

- training in the ability to apply knowledge for the proper use of methods and techniques of physiotherapy, balneology and rehabilitation;

- providing general and professional training in the use of therapeutic physical factors that determine the readiness of the future specialist for life and the chosen profession.

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

**4. Teaching methods**:

1. Verbal method.

2. Visual method.

3. Computer method.

4. Independent work with literary sources.

5. Moodle system.

**5. Recommended literature**

1. Аерозоль та електроаерозоль терапія (навч.- метод. посібник для самост. роботи): Зінченко О.К., Калюжка А.А., Роздільська О.М., Маслова В.С.- Харків: ТОВ «Друкарня Мадрид», 2017.- 56 с.

2. Воробйов Є.О. Загальна фізіотерапія (підручник для студ. мед. фак. вищ.мед. навч. закладів III-IV рівнів акредитації) / Воробйов Є.О., Новак О.В. – Полтава: Полтава, 2002. – 247 с.

3. Грязелікування (навч. посібник для самост. роботи): Бондаренко С.В., Калюжка А.А.- Харків: ТОВ «Друкарня Мадрид», 2018.- 42 с.

4. Деякі фізичні чинники в практиці сімейного лікаря (навчальний посібник для сімейних лікарів, затверджений в МОН України) / Хвисюк О.М., Калюжка А.А., та інш // Харків, 2010.- 113 с.

5.Фізичні фактори в медичній реабілітації хворих на серцево – судинні захворювання (навч. – метод. посібник): Роздільська О.М., Зінченко О.К., Тондій Л.Д., Васильєва – Лінецька Л.Я., Нечипуренко О.М., Калюжка А.А..; за заг. ред. проф. Роздільської О.М.- Харків:Видавництво «Точка», 2017.- 136 с.

6. Яковенко Н.П. Фізіотерапія (Підручник) / Яковенко Н.П., Самойленко В.Б..-Київ. ВСВ «Медицина» - 2018.-255 с.

7. Nechypurenko O,Kaliuzhka A,Lutsenko O.Affiliations Georgian Medical News [01 Dec 2018(285):107-111]Type: Journal Article The effect of vibro-acoustic stimulation on cell dynamics of inflammation in rats and the possibilities for vibroacoustic sound therapy in complex treatment of bronchitis in children. (PMID:30702081)

8.Ponomarenko G.N. Physiotherapy: national leadership / G.N. Ponomarenko. —Геотар Медиа, 2014. — 864 с.

**6. Prerequisites and co-requisites of the discipline:**The study of the discipline involves the prior mastering of disciplines in physical education, physical rehabilitation, sports medicine, anatomy, physiology, hygiene, psychology, medical rehabilitation, sports physiology, age physiology, propaedeutics, internal medicine, propaedeutics, internal medicine 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: the**applicant for higher education in the process of studying the discipline must know:

- mechanisms of therapeutic action of therapeutic physical factors;

- indications and contraindications to the appointment of therapeutic physical factors;

- features of the appointment of therapeutic physical factors at all stages of treatment and rehabilitation, as well as their use for preventive purposes;

- organization of resort business in Ukraine, features of referral of patients for sanatorium - resort treatment and its appointment, depending on the main pathology and concomitant diseases.

From the applicant of higher education masters obligatory practical skills:

- to determine the therapeutic effect of   therapeutic physical factors;

- use therapeutic physical factors in accordance with impaired functions;

- correctly prescribe therapeutic physical factors, both natural and preformed, depending on the stage and severity of the pathological process;

- to combine therapeutic physical factors with other types of treatment;

- work with basic physiotherapy equipment, according to their algorithms;

-correctly combine therapeutic physical factors in the sanatorium - resort conditions;

-use therapeutic physical factors in order to harden and prevent disease;

- have a modern arsenal of methods and techniques of physiotherapy, balneology, rehabilitation for timely and adequate use in the treatment of patients of various profiles, aimed at the most effective and rapid recovery of health and impaired functions, and if this is not possible - to create sustainable compensation, in in general - to improve the quality of life of patients.

The content of the discipline

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Names of sections and topics** | **Number of hours** | | | |
| **Full-time** | | | |
| **total** | **including** | | |
| **lec** | **pr** | **cf.** |
| **1** | **2** | **3** | **4** | **5** |
| Discipline section 1. Natural therapeutic physical factors. | | | | |
| Topic 1. Introduction. The concept of physiotherapy, balneology and rehabilitation. Definition and classification of natural and preformed physical factors used in medicine. Indications and contraindications to the appointment of natural and preformed physical factors. General rules for the appointment and application of natural and preformed physical factors. Safety precautions when working with physiotherapy equipment. First aid for electric shock. | 7 | - | 2 | 5 |
| Topic 2. Features of the use of climate and its individual components. | 7 | - | 2 | 5 |
| Topic 3. Therapeutic and preventive use of natural fresh and mineral waters. | 7 | - | 2 | 5 |
| Topic 4. Therapeutic mud, ozokerite, naphthalene, sand, clay, bischofite. | 7 | - | 2 | 5 |
| Topic 5. Modern views on the therapeutic and prophylactic effects of metals, stones and minerals. | 7 | - | 2 | 5 |
| Topic 6. Therapeutic - preventive effect of fauna factors and its individual representatives. | 6 | - | 1 | 5 |
| Discipline section 2. Preformed therapeutic physical factors. | | | | |
| Topic 1. Organization of physiotherapy service in Ukraine. The structure of the physiotherapy department and office. Therapeutic effect of direct and pulsed electric current. Galvanization. Medical electrophoresis. Diadynamotherapy. Sinusoidal - modulated currents. Electroson therapy. Interference therapy and fluctuorization. Electrodiagnostics. Electrical stimulation. Safety precautions when working with physiotherapy equipment. First aid for electric shock. | 6 | - | 1 | 5 |
| Topic 2. Therapeutic use of pulsed currents of high voltage and low power (darsonvalization and ultratonotherapy), electric field (franklinization, electrostatic massage, infitherapy, ultrahigh-frequency therapy), electromagnetic radiation, physiotherapy , microwave, wave therapy, centimeter . | 6 | - | 1 | 5 |
| Topic 3. Therapeutic use of magnetic fields (permanent magnetic therapy, pulsed high-intensity magnetic therapy, low-frequency magnetic therapy). Safety precautions when working with physiotherapy equipment. | 6 | - | 1 | 5 |
| Topic 4. Therapeutic and prophylactic use of optical radiation (phototherapy). Safety precautions when working with physiotherapy equipment. | 6 | - | 1 | 5 |
| Topic 5. Therapeutic use of mechanical factors (vibroacoustic therapy, ultrasound therapy, ultraphonophoresis). Safety precautions when working with physiotherapy equipment. | 5 | - | 1 | 4 |
| Topic 6. Aerosol and electroaerosol therapy. Features of action of air space factors (barotherapy, normobaric hypoxic therapy, halotherapy). | 5 | - | 1 | 4 |
| Topic 7. Hydrotherapy (hydrotherapy and balneotherapy). Safety precautions when working with physiotherapy equipment. | 5 | - | 1 | 4 |
| Topic 8. Heat and cold treatment (paraffin therapy, general cryotherapy and local hypothermia). Safety precautions when working with physiotherapy equipment. | 5 | - | 1 | 4 |
| Topic 9. Principles of selection for spa treatment. Indications and contraindications to sanatorium treatment. The main resorts of Ukraine and the world. | 5 | - | 1 | 4 |
| Together | 90 | - | 2 0 | 7 0 |

**Lecture topics.** The program does not provide for seminars.

**Topics of seminars**

The program does not provide for seminars.

Topics of practical classes

|  |  |  |
| --- | --- | --- |
| №  s / n | Name topics | Number  hours |
| Discipline section 1. | | |
| 1 | Introduction. The concept of physiotherapy, balneology and rehabilitation. Definition and classification of natural and preformed physical factors used in medicine. Indications and contraindications to the appointment of natural and preformed physical factors. . General rules of appointment and implementation of procedures. Safety precautions when working with physiotherapy equipment. | 2 |
| 2 | Features of the use of climate and its individual components. | 2 |
| 3 | Therapeutic and preventive use of natural fresh and mineral waters. | 2 |
| 4 | Therapeutic mud, ozokerite, naphthalene, sand, clay, bischofite. | 2 |
| 5 | Modern views on the therapeutic and prophylactic effects of metals, stones and minerals. | 2 |
| 6 | Therapeutic and prophylactic influence of fauna factors and its separate representatives. | 1 |
|  | Discipline section 2. | |
| 7 | Organization of physiotherapy service in Ukraine. The structure of the physiotherapy department and office. Therapeutic effect of direct and pulsed electric current. Galvanization. Medical electrophoresis. Diadynamotherapy. Sinusoidal - modulated currents. Electroson therapy. Interference and fluctuation. Electrodiagnostics. Electrical stimulation. Safety precautions when working with physiotherapy equipment. | 1 |
| 8 | Therapeutic use of pulsed currents of high voltage and low power (darsonvalization and ultratonotherapy), electric field (franklinization, electrostatic massage, infitherapy, ultrahigh-frequency therapy), electromagnetic radiation (decimeter-wave, centimeter-wave and centimeter-wavelength). Safety precautions when working with physiotherapy equipment. | 1 |
| 9 | Therapeutic use of magnetic fields (permanent magnetic therapy, pulsed high-intensity magnetic therapy, low-frequency magnetic therapy). Safety precautions when working with physiotherapy equipment. | 1 |
| 10 | Therapeutic and prophylactic use of optical radiation (phototherapy). Safety precautions when working with physiotherapy equipment. | 1 |
| 11 | Therapeutic use of mechanical factors (vibroacoustic therapy, ultrasound therapy, ultraphonophoresis). Safety precautions when working with physiotherapy equipment. | 1 |
| 12 | Aerosol and electroaerosol therapy. Features of action of air space factors (barotherapy, normobaric hypoxic therapy, halotherapy). | 1 |
| 13 | Hydrotherapy (hydrotherapy and balneotherapy). Safety precautions when working with physiotherapy equipment. | 1 |
| 14 | Heat and cold treatment (paraffin therapy, general cryotherapy and local hypothermia). Safety precautions when working with physiotherapy equipment. | 1 |
| 15 | Principles of selection for sanatorium treatment. Indications and contraindications to sanatorium treatment. The main resorts of Ukraine and the world. | 1 |
|  | Together | 2 0 |

Topics of laboratory classes

Laboratory classes are not provided by the program.

Individual work

|  |  |  |
| --- | --- | --- |
| №  s / n | Name topics | Number  hours |
| 1 | Introduction. The concept of physiotherapy, balneology and rehabilitation. Definition and classification of natural and preformed physical factors used in medicine. Indications and contraindications to the appointment of natural and preformed physical factors. General rules of appointment and implementation of procedures. Safety precautions when working with physiotherapy equipment. | 5 |
| 2 | Features of the use of climate and its individual components. | 5 |
| 3 | Therapeutic and preventive use of natural fresh and mineral waters. | 5 |
| 4 | Therapeutic mud, ozokerite, naphthalene, sand, clay, bischofite. | 5 |
| 5 | Modern views on the therapeutic and prophylactic effects of metals, stones and minerals. | 5 |
| 6 | Therapeutic and prophylactic influence of fauna factors and its separate representatives. | 5 |
| 7 | Organization of physiotherapy service in Ukraine. The structure of the physiotherapy department and office. Therapeutic effect of direct and pulsed electric current. Galvanization. Medical electrophoresis. Diadynamotherapy. Sinusoidal - modulated currents. Electroson therapy. Interference and fluctuation. Electrodiagnostics. Electrical stimulation. Safety precautions when working with physiotherapy equipment. | 5 |
| 8 | Therapeutic use of pulsed currents of high voltage and low power (darsonvalization and ultratonotherapy), electric field (franklinization, electrostatic massage, infitherapy, ultrahigh-frequency therapy), electromagnetic radiation (decimeter-wave, safety-wave therapy). | 5 |
| 9 | Therapeutic use of magnetic fields (permanent magnetic therapy, pulsed high-intensity magnetic therapy, low-frequency magnetic therapy). Safety precautions when working with physiotherapy equipment. | 5 |
| 10 | Therapeutic and prophylactic use of optical radiation (phototherapy). Safety precautions when working with physiotherapy equipment. | 5 |
| 11 | Therapeutic use of mechanical factors (vibroacoustic therapy, ultrasound therapy, ultraphonophoresis). Safety precautions when working with physiotherapy equipment. | 4 |
| 12 | Aerosol and electroaerosol therapy. Features of action of air space factors (barotherapy, normobaric hypoxic therapy, halotherapy). | 4 |
| 13 | Hydrotherapy (hydrotherapy and balneotherapy). Safety precautions when working with physiotherapy equipment. | 4 |
| 14 | Heat and cold treatment (paraffin therapy, general cryotherapy and local hypothermia). Safety precautions when working with physiotherapy equipment. | 4 |
| 15 | Principles of selection for sanatorium treatment. Indications and contraindications to sanatorium treatment. The main resorts of Ukraine and the world. | 4 |
|  | Together | 70 |

**Discipline policy and values**

Requirements for studying the discipline: It is expected that higher education 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)

Written and homework should be done in full and on time, if applicants of higher education have questions, you can contact the teacher in person or by e-mail that the teacher / -ka will provide the first practical lesson.

During lectures applicants Higher Education recommended to keep synopsis classes and keep an adequate level of silence. Asking questions to the lecturer is perfectly normal.

Practical training

Active participation during the discussion in the audience: applicants for higher education 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.

Attendance and behavior: It is important for higher education 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.

The use of electronic gadgets is the main and powerful source of information for the study of the course, adaptable to modern requirements and promotes entry into the modern European educational space. Gadgets provide constant feedback: "teacher-applicant for higher education", "applicant for higher education - applicant for higher education", "applicant for higher education - a group of applicants for higher education".

Academic Integrity Policy: The Department of Physical Rehabilitation and Sports Medicine with Physical Education and Health maintains zero tolerance for plagiarism. Male and female students are expected to constantly raise their awareness of academic writing. At the first classes, informational activities will be held on what exactly is considered plagiarism and how to properly conduct research and scientific research (including liability for violations of academic integrity).

Policy for people with special educational needs:

The organization of inclusive education in higher education institutions is carried out in accordance with the resolution of the Cabinet of Ministers of Ukraine dated 10.07.2009 № 635 "On approval of the Procedure for the organization of inclusive education of persons with special educational needs in higher education institutions". The university has created conditions for the opportunity to receive educational services for citizens with special needs. To access the premises are equipped with ramps, support is provided. ( Order of 22.06.2018 3203. On approval of the Procedure for support (assistance) of persons with disabilities, the elderly, other low-mobility groups during their stay on the territory (premises) of KNMU ) htth//www.khnmu.kharkov.ua.

Recommendations for successful completion of the discipline : For successful completion of the discipline it is necessary for students of higher education to be active during practical classes and perform the necessary minimum of educational work.

Incentives and penalties:   To encourage the study of the discipline, applicants for higher education may be awarded additional points for participation in conferences, research and research of the department. From applicants higher education expected interest participation in local, national and international conferences, competitions and other events with the objective profile. A creative approach in its various manifestations is welcome

Safety precautions . The first lesson of the course will be basic principles of safety through proper instruction. It is expected that higher education seekers should know where the nearest evacuation exit is, where the fire extinguisher is, how to use it, and so on.

Procedure for informing about changes in the syllabus .

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

Current control (mastery of certain topics) is carried out in the form of oral interviews, testing, conversations of higher education 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 evaluate the independent work of higher education students, an alternative option is offered *(optional)*: traditional types of tasks: writing a test, abstract or creative types: preparation of a multimedia presentation, 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 that 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 the success of higher education students in the ECTS of the 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 (practice) is in accordance with the plan of work developed by the department.

Missing classes for any reason is mandatory for all higher education 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.

Irrespective of the reasons for admission, applicants for higher education are required to complete the missed classes before the examination 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;

The practice of skipping lectures is carried out exclusively by preparing for the defense (interview with the lecturer) of the abstract on the topic of the lecture. The abstract should have the following structure : title page, plan, introduction, main part (sections, paragraphs and sub-paragraphs), conclusions, list of sources used, appendices (if necessary).

The abstract is submitted to the teacher of the academic group, who checks compliance with the requirements for its writing and submits it to the head of the department or lecturer. The head of the department or the lecturer appoints the term of defense of the abstract, but not later than one week from the date of submission of the abstract to the teacher.

With the permission of the head of the department it is allowed to prepare an abstract in electronic form with its subsequent defense in the general order.

Practice of practical, laboratory, seminar 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 :

1. What are the main physico-chemical processes determine the therapeutic effect of physical factors?

2. What phenomenon underlies the occurrence of electric current?

3. What types of electric current do you know?

4. What can be the form of pulsed electric currents used in physiotherapy?

5. What are the main groups of all substances, according to the values ​​of magnetic permeability?

6. What factors can cause an electric current?

7. Name the main values ​​used to quantify the electric current?

8. Define the magnetic field.

9. Identify the basic principles of organization of physiotherapy services in Ukraine.

10. How is the physiotherapy department organized?

11. What are the performance of physiotherapy facilities?

12. Tell about ethics and deontology in physiotherapy.

13. How to correctly appoint staff to the physiotherapy department?

14. What regulations should be in the physiotherapy department?

15. Features of work of physiotherapeutic nurses in departments.

16. Who has the right to work with devices in physiotherapy departments?

17. Can I prescribe physical treatment to a doctor who has no special training?

18 . In what form is the drug introduced into the body during the electrophoresis procedure?

19 . Name the devices that are used for medical electrophoresis.

20 . Define the method of diadynamic therapy.

21 . What is the duration of the analgesic effect of a single diadynamic therapy procedure?

22 . What is the "carrier" frequency of amplipulse therapy?

23 . How to dose the current during amplipulse therapy?

24 . What characterizes the concept of "kind of work" in amplipulse therapy?

25 . What is the device used for UHF therapy and the algorithm for working with it?

26 . Define the method of microwave therapy .

27 . What is the duration of the analgesic effect of a single procedure of UHF therapy?

28 . What is the oscillatory effect of UHF therapy ?

29 . How is the procedure dosed during UHF therapy ?

30 . What characterizes the concept of shortwave therapy?

31 . Name the devices that are used for magnetic therapy and the algorithm for working with them .

32 . Define the method of magnetic therapy .

33 . What is the duration of the magnetic therapy procedure ?

34 . What is the magnitude of magnetic induction in portable magnetic therapy devices ?

35 . How is magnetic therapy dosed ?

36 . What characterizes magnetic induction ?

37. Define light.

38. Define the concept of "Laser Therapy ".

39. Define the concept of "Thalassotherapy".

40. Define the concept of "diode light".

41. What is a "hydrolaser"?

42. Define polarized light.

43. Define light therapy.

44. What are the contraindications to the use of vibrotherapy?

45. What is the total duration of the vibromassage procedure?

46. What devices are used for local barotherapy?

4 7 . What is the optimal time interval between courses of local barotherapy?

48 . How does the course of normobaric hypoxic therapy affect the body's resistance to various environmental factors?

49 . Which of the following diseases are contraindicated for the appointment of hyperbarotherapy?

50 . What does the word "aerosol" mean?

51 .What is the "dispersed phase" of the aerosol?

52 . What is a "dispersed medium"?

53 . How are "dispersion" aerosols formed ?

54. What equipment is intended for aerosol therapy ?

55 . How are the features of ultrasonic inhalers ?

56 . What drugs are used in aerosol therapy ?

57 . What are nebulizer aerosols ?

58 . What is the function of the ciliated epithelium of the respiratory tract?

59 . What are the features of metered individual inhalers ?

60 . What is hydrotherapy?

61 . How is the needle shower procedure performed?

62 . What are the features of a rain shower?

63 . What are the indications for a circular shower?

64 . What are pine baths ?

65 . How to take sage baths ?

66 . What is the effect of lavender baths ?

67 . When is the use of a jet shower indicated?

68 . What is the peculiarity of the jet shower procedure?

69 . What causes the action of water showers?

70. Radon baths and their features.

Tasks for independent work

- preparation for classroom classes (lectures, practical);

- performance of practical tasks during the semester;

- independent study of certain topics of the discipline;

- preparation and implementation of tasks provided by the program of practical training;

- preparation for all types of control (credit).

Rules for appealing the assessment

The student's appeal against 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