



MINISTRY OF EDUCATION AND SCIENCE OF THE RUSSIAN FEDERATION  
Federal state autonomous educational institution  
of higher education  
«Far Eastern Federal University»  
(FEFU)

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**SCHOOL OF BIOMEDICINE**

«AGREED»

Head of education program  
«General medicine»

  
\_\_\_\_\_  
(signature) Khotimchenko Yu.S.  
(Full name)  
«09» of July 2019

«APPROVED»

Director of the Department of Clinical  
Medicine



  
\_\_\_\_\_  
(signature) Geltser B.I.  
(Full name)  
«09» of July 2019

**WORKING PROGRAM OF ACADEMIC DISCIPLINE (WPAD)**

«Medical Rehabilitation»

Education program

Specialty 31.05.01 «General medicine»

**Form of study: full time**

year 5 semester A  
lectures 18 hours  
practical classes 36 hours  
laboratory works not provided  
total amount of in-classroom works 54 hours  
independent self-work 54 hours  
control works ()  
pass-fail exam year 5, semester A  
exam not provided

The working program is drawn up in accordance with the requirements of the Federal state educational standard of higher education (level of training), approved by the order of the Ministry of education and science of the Russian Federation from 09.02.2016 № 95.

The working program of the discipline was discussed at the meeting of the Department of fundamental and clinical medicine. Protocol No. 8, 09 of July 2019

Authors: professor Beniova S.N., PhD Korableba E.V.

## RESUME

The discipline "Medical rehabilitation" is purposed for students enrolled in the educational program 31.05.01 "General medicine" and included in the basic part of the curriculum.

Discipline is implemented in the 5 year A semester

Development of the working program of the discipline was made in accordance to the federal state educational standard of higher education (the level of training of highly qualified personnel) in the specialty 31.05.01 "General medicine", the curriculum of training students in the profile of General Medicine

The total complexity of the discipline is 108 hours, 3 credits.

The course program is based on the basic medical knowledge gained by specialists:

the ability to use the methods and means of physical culture to ensure full social and professional activities (GPC - 6);

the willingness to solve common tasks of professional activity with the use of information and bibliographic resources, biomedical terminology, information and communication technologies, taking into account the main requirements for information security (GPC – 1)

the capacity for the assessment of morphological and physiological states and pathological processes in the human body for solving professional tasks (GPC – 9)

**Course goal:** the program is the formation of systemic knowledge and skills of students on medical rehabilitation.

### **Objectives:**

- study of organization of rehabilitation and prevention of disability;
- teaching students the ability to choose the tools and methods of rehabilitation and prevention of disabilities;
- formation of student practical skills related to organization of rehabilitation and prevention of disability.

### **To know:**

- regulation of the basic provisions of rehabilitation and prevention of disability;
- WHO documents relating to rehabilitation;
- normative documents of the Ministry of health of the Russian Federation on rehabilitation;
- general issues of organization of medical rehabilitation service in Primorsky Krai;
- theoretical and methodological basis of medical rehabilitation (concept of consequences of the disease-ICIDH, ICF);
- form of individual program of medical rehabilitation;
- clinical and rehabilitation groups of patients;
- criteria of disability; methods of assessing the functional state and life of patients with therapeutic profile (IHD, AH, etc.)

**To able to:**

- form a clinical and functional diagnosis according to the examination and functional studies;
- assess the functional state and life activity of patients with the most common disabling therapeutic pathology;
- choose tools and methods of rehabilitation for the listed categories of patients.

**To master:**

- examination and functional research skills
- skills to assess the functional state and life activity of patients with the most common disabling therapeutic pathology
- skills to determine the methods of rehabilitation

**2. As a result of the study of this discipline, students form the following professional competencies.**

Requirements for the results of the discipline studying:

<b>Competence and its code</b>	<b>Stages of competence formation</b>	
PC-1 the ability and willingness to implement a set of measures aimed at the preservation and promotion of health. It includes the formation of a healthy lifestyle, the prevention of occurrence and (or) the spread of diseases, their early diagnosis, the identification of their causes, as well as this set is aimed at elimination of harmful effects of environmental factors on human health	Knows	Principles of occurrence and (or) spread of diseases, their early diagnosis, identification of the causes and conditions for their occurrence and development,
	Is able to	To carry out a set of measures aimed at preserving and promoting health.
	Possesses	Skills in implementing activities aimed at preserving and promoting health
PC-5 the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases	Knows	Methods of history taking and interpretation of laboratory, instrumental, autopsy and other studies
	Is able to	Evaluate the results of history data, the results of the examination, laboratory, instrumental, autopsy and other studies
	Possesses	Skills of an assessment of data of the anamnesis, results of survey, laboratory, tool, pathoanatomical and other researches
PC-8 the ability to determining the tactics of patient surveillance with different nosological entities.	Knows	Nosological forms of the disease, the management of patients with various diseases
	Is able to	To provide the necessary medical care and rehabilitation measures in various nosological forms.
	Possesses	Skills of providing medical care and rehabilitation measures in various nosological forms
PC-14 the readiness for determining the need to use natural healing factors, the drug, non-drug therapy and other methods of treatment in patients who are in need of medical rehabilitation and sanatorium treatment	Knows	Basic rules of hygienic measures of well-being
	Is able to	Carry out hygiene measures of a health nature
	Possesses	Skills for teaching patients and their relatives basic hygienic measures of a health-improving nature, skills for self-monitoring of basic physiological indicators,
GPC-8 the readiness for medical use of drugs and other medical substances and their combinations in solving professional problems	Knows	List of essential drugs and other substances and their combinations.
	Is able to	To carry out the treatment of patients with the most common diseases of internal organs and rehabilitation measures
	Possesses	Modern methods of rational, individualized pharmacotherapy

# **I. THE STRUCTURE AND CONTENT OF THE THEORETICAL PART OF THE COURSE (18 HOURS, INTERACTIVE FORM – 4 HOURS).**

## **MODULE 1 GENERAL ISSUES OF MEDICAL REHABILITATION**

### **Theme 1-2. Organization of medical care for medical rehabilitation (4 hours)**

Contents of the theme: Indications and contraindications to the administration of a non-drug treatments (exercise therapy, physiotherapy, reflexotherapy, manual therapy, diet therapy, etc.). Standards of care for medical rehabilitation. Stages, levels and aspects of rehabilitation (medical, social, professional, psychological). Ergotherapy in the rehabilitation system

### **Theme 3-4. Place and role of physical therapy in rehabilitation treatment (4 hours)**

The content of the theme: classification of the means of physiotherapy. The basic principles of selection and dosage of physical activity. Contraindications to the appointment of physical therapy. The order of administration of therapeutic gymnastics and documentation. Features of exercise therapy in the rehabilitation of children. Therapeutic massage: classification, mechanism of action, the main methods of massage. Gymnastics and massage of children of the first year of life.

## **MODULE 2 PARTICULAR ISSUES OF MEDICAL REHABILITATION**

### **Theme 5. SPA-treatment as a factor of rehabilitation (2 hours)**

Theme content: the structure of SPA treatment. Children's SPA. Characteristic of the Northern resorts. Contraindications for application of SPA treatment. Balneotherapy: methods of reception of mineral waters at various diseases. Pelloidotherapy, indications and contraindications for its prescription. The algorithm of the rehabilitation program in a sanatorium.

### **Theme 6. Medical rehabilitation of patients with cardiovascular diseases (2 hours)**

Content of the theme: Features of the use of non-drug and non-traditional methods of treatment for hypertension, vegetative-vascular dystonia,

rheumocarditis, heart disease. The use of physical therapy in diseases of the cardiovascular system. Physiotherapy for cardiovascular diseases.

**Theme 7. Medical rehabilitation in diseases of the respiratory system (2 hours)**

Content of the theme: Clinical and physiological rationale for the use of non-drug and non-traditional methods of treatment in the therapy of acute and chronic lung diseases. Features of methods of treatment for pneumonia, asthma, bronchiectasis, cystic fibrosis. Training in techniques for draining exercises, sound gymnastics. The methods of evaluation of medical rehabilitation means for treatment of the respiratory system diseases. The use of physical therapy in lung disease. Physiotherapy in diseases of respiratory organs.

**Theme 8-9. Physical rehabilitation in traumatology, orthopedics and surgery (4 hours)**

Contents of the theme: exercise therapy for posture disorders, scoliosis, flat feet. Tools of non-drug and non-traditional methods of treatment in the phased treatment of surgical patients. Methods of rehabilitation in operations on the abdominal and thoracic cavity. Principles of organization and features of the method of exercise therapy for bone fractures of the limbs, spine and pelvic bones. Efficiency evaluation. Physiotherapy in orthopedics, surgery and traumatology.

**II. THE STRUCTURE AND CONTENT OF THE PRACTICAL PART OF THE COURSE (54 hours, interactive form - 24 hours)**

**Theme 1. Organization of physiotherapy service in Russia (4 hours).**

Theme content: Physiotherapy department (FTD): organization, scope, activities. The role of physical factors in the rehabilitation process. Forms of primary medical documentation FTD. Features of ethics and deontology in physiotherapy. Physical and chemical bases of action of physical factors. The main approaches to the therapeutic use of physical factors. Features of physiotherapy in pediatrics. Compatibility of physiotherapy, the sequence of appointment.

**Theme 2-3. Physiotherapy in complex rehabilitation of patients (8 hours).**

The content of the theme: Classification of physiotherapy methods. Basic principles of selection and dosage. Contraindications to application of physical therapy. Electrotherapy. Phototherapy. Mechanical impact. Aerosol and electroaerosol therapy, halotherapy. Hydrotherapy. Balneotherapy. Treatment with heat and cold. Bud therapy.

**Theme 4. Basics of reflexology (4 hours).**

Theme content: a brief overview of the main theories of oriental medicine. The types and techniques of acupuncture (acupressure, acupuncture, reflexology surface, auriculariacea, etc.). Indications and contraindications to application of these methods. Reflexology in emergency conditions.

**Theme 5. Principles of application of physical therapy in rehabilitation treatment (4 hours).**

The content of the theme: classification of the physiotherapy tools. The basic principles of selection and dosage of physical activity. Contraindications to application of physical therapy. The order of application of therapeutic gymnastics and documentation. Features of exercise therapy in the rehabilitation of children. Therapeutic massage: classification, mechanism of action, the main methods of massage. Gymnastics and massage of children of the first year of life.

**Theme 6-7. Organization of rehabilitation of patients with cardiovascular diseases (8 hours).**

Content of the theme: Features of the use of non-drug and non-traditional methods of treatment for hypertension, vegetative-vascular dystonia, rheumocarditis, heart disease. The use of physical therapy in diseases of the cardiovascular system. Physiotherapy for cardiovascular diseases.

**Theme 8. Organization of rehabilitation for respiratory diseases (4 hours).**

Content of the theme: Clinical and physiological rationale for the use of non-drug and non-traditional methods of treatment in the treatment of acute and chronic

lung diseases. Features of treatment methods for pneumonia, asthma, bronchiectasis, cystic fibrosis. Training in techniques for draining exercises, sound gymnastics. The methods of evaluation of means for medical rehabilitation in diseases of the respiratory system. The use of physical therapy in lung disease. Physiotherapy in diseases of respiratory organs.

**Theme 9. Medical rehabilitation for gastrointestinal diseases and diseases caused by metabolic disorders (4 hours).**

Contents of the theme: Objectives, indications and contraindications to the application of non-drug and non-traditional methods of treatment for diseases of the gastrointestinal tract. Clinical and physiological rationale for the use of kinesotherapy in biliary dyskinesia and colon. Private methods of therapeutic gymnastics in visceroptosis. The use of medical rehabilitation for obesity and diabetes. Physiotherapy in the pathology of the gastrointestinal tract and diseases caused by metabolic disorders.

**Theme 10-11. Physical rehabilitation in traumatology, orthopedics and surgery (8 hours)**

Contents of the theme: exercise therapy for posture disorders, scoliosis, flat feet. Means of non-drug and non-traditional methods of treatment in the phased treatment of surgical patients. Methods of rehabilitation after surgery on the abdominal and thoracic cavity. Principles of organization and features of the method of exercise therapy for bone fractures of limbs, spine and pelvic bones. Efficiency evaluation. Physiotherapy in orthopedics, surgery and traumatology.

**Theme 12. Medical rehabilitation for neurological diseases (4 hours).**

The content of the theme: Features of application methods of non-drug and non-traditional methods of treatment for diseases of the peripheral nervous system (neuropathy). Basic recommendations for care and rehabilitation. Physical rehabilitation in cerebral palsy. Physiotherapy for neurological diseases.

**Theme 13-14. Medical rehabilitation in orthopaedic dentistry (8 hours)**



Contents of the theme: Features of the use of non-drug and non-traditional methods of treatment. Methods of rehabilitation. Efficiency evaluation. Physiotherapy in dentistry.

**Theme 15. Credit lesson. (2 hours)**

**I. TRAINING AND METHODOLOGICAL SUPPORT OF INDEPENDENT WORK OF STUDENTS**

Training and methodological support of independent self-work of students in the discipline "Medical rehabilitation" is presented in Appendix 1 and includes:

- characteristics of tasks for independent self-work of students and guidelines for their implementation;
- requirements for the presentation and execution of the results of independent work;
- criteria for evaluating the performance of independent work.

**IV. MONITORING THE ACHIEVEMENT OF THE COURSE OBJECTIVES**

No.	Controlled sections / topics of disciplines	Codes and stages of the formation of competencies	Evaluation tools - name		
			No.	Controlled sections / topics of disciplines	
	<b>Module 1</b> General issues of medical rehabilitation <b>Module 2</b> Particular issues of medical rehabilitation	GPC-8 the readiness for medical use of drugs and other medical substances and their combinations in solving professional problems	Knows	EO-1 Interview	Questions of final control A semester - 1-36
			Is able to	PW-1 Test	PW-1 Test
			Possesses	EO-3 Report	EO2 Colloquium
	<b>Module 1</b> General issues of medical rehabilitation <b>Module 2</b> Particular issues of medical rehabilitation	PC-1 the ability and willingness to implement a set of measures aimed at the preservation and promotion of health. It includes the formation of a healthy lifestyle, the prevention of occurrence and (or) the spread of diseases, their	Knows	EO-1 Interview	Questions of final control A semester - 1-36
			Is able to	PW-1 Test	PW-1 Test
			Possesses	EO-3 Report	EO2 Colloquium

		early diagnosis, the identification of their causes, as well as this set is aimed at elimination of harmful effects of environmental factors on human health			
	<b>Module 1</b> General issues of medical rehabilitation <b>Module 2</b> Particular issues of medical rehabilitation	PC-5 the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases	Knows	EO-1 Interview	Questions of final control A semester - 1-38
			Is able to	PW-1 Test	PW-1 Test
			Possesses	EO-3 Report	EO2 Colloquium
	<b>Module 1</b> General issues of medical rehabilitation <b>Module 2</b> Particular issues of medical rehabilitation	PC-8 the ability to determining the tactics of patient surveillance with different nosological entities.	Knows	EO-1 Interview	Questions of final control A semester - 36-110
			Is able to	PW-1 Test	PW-1 Test
			Possesses	EO-3 Report	EO2 Colloquium
	<b>Module 1</b> General issues of medical rehabilitation <b>Module 2</b> Particular issues of medical rehabilitation	PC-14 the readiness for determining the need to use natural healing factors, the drug, non-drug therapy and other methods of treatment in patients who are in need of medical rehabilitation and sanatorium treatment	Knows	EO-1 Interview	Questions of final control A semester - 1-38
			Is able to	PW-1 Test	PW-1 Test
			Possesses	EO-3 Report	EO2 Colloquium

*Approximate types of assessment tools: interview on situational tasks, written or computer testing, standard calculations, individual tasks, abstract, essay, etc.*

Control and methodological materials as well as criteria and indicators necessary for the assessment of knowledge and skills, and characterizing the stages of the formation of competencies in the process of mastering the educational program are presented in Appendix 2.

## V. LIST EDUCATIONAL LITERATURE AND INFORMATION SUPPORT OF DISCIPLINE

### **Main literature:**

1. Advanced Robotics for Medical Rehabilitation / Shane (S.Q.) Xie / Springer International Publishing Switzerland 2016  
<https://link.springer.com/book/10.1007/978-3-319-19896-5#authorsandaffiliationsbook>

2. Handbook of Vocational Rehabilitation and Disability Evaluation / Reuben Escorpizo, Sören Brage, Debra Homa, Gerold Stucki / Springer International Publishing Switzerland 2015  
<https://link.springer.com/book/10.1007/978-3-319-08825-9#editorsandaffiliations>

### **Additional literature:**

1. Exercise and Physical Functioning in Osteoarthritis / Joost Dekker / The Author(s) 2014 <https://link.springer.com/book/10.1007/978-1-4614-7215-5#editorsandaffiliations>

### **Legislative and regulatory documents:**

1. "Constitution of the Russian Federation" (adopted by popular vote 12.12.1993) (as amended by the Laws of the Russian Federation on amendments to the Constitution of the Russian Federation).

2. Federal law "on immunoprophylaxis of infectious diseases" / Russian Federation. P. 14-18

3. The Federal law from 12.01.1995 N 5-FZ (as amended on 22.12.2014) "On veterans»

4. The Federal law of 23.02.1995 N 26-FZ"on natural medicinal resources, therapeutic areas and resorts".

5. Federal law of 8.01.1998 N 3-FZ "on narcotic drugs and psychotropic substances".
6. Federal law of 24.07.1998 N 124-FZ " on basic guarantees of the rights of the child in the Russian Federation»
7. Federal law of 30.03.1999 N 52-FZ "on sanitary and epidemiological welfare of the population".
8. Federal law of 18.06.2001 N 77-FZ "on preventing the spread of tuberculosis in the Russian Federation".
9. Federal law of 10.07.2001 N 87-FZ "on restriction of tobacco Smoking".
10. Federal law of 12.04.2010 N 61-FZ "on circulation of medicines".
11. The Federal law of the Russian Federation of 29.11.2010 N 326-FZ "about obligatory medical insurance in the Russian Federation".
12. The Federal law of 04.05.2011 N 99-FZ "about licensing of separate types of activity".
13. The Federal law of the Russian Federation of 21.11.2011 N 323-FZ "about bases of protection of health of citizens in the Russian Federation".
14. "The civil code of the Russian Federation (part one)" of 30.11.1994 N 51-FZ.
15. "The civil code of the Russian Federation (part two)" of 26.01.1996 N 14-FZ.
16. "The civil code of the Russian Federation (part three)" of 26.11.2001 N 146-FZ.
17. "Labor code of the Russian Federation" of 30.12.2001 N 197-FZ.
18. The law of the Russian Federation of 02.07.1992 N 3185-I "about psychiatric care and guarantees of the rights of citizens at its rendering".
19. The decree of the President of the Russian Federation of 09.10.2007 N 1351 "about the approval of the concept of demographic policy of the Russian Federation for the period till 2025".

20. Order of the Ministry of health and social development of the Russian Federation of 29.07.2011 N 624n "about the statement of the order of issue of sheets of disability".

## LIST OF INFORMATION TECHNOLOGIES AND SOFTWARE

The location of the computer equipment on which the software is installed, the number of jobs	List of licensed software
Multimedia auditorium Vladivostok Russian island, Ayaks 10, building 25.1, RM. M723 Area of 80.3 m2 (Room for independent work)	Windows Seven enterprise SP3x64 Operating System Microsoft Office Professional Plus 2010 office suite that includes software for working with various types of documents (texts, spreadsheets, databases, etc.); 7Zip 9.20 - free file archiver with a high degree of data compression; ABBYY FineReader 11 - a program for optical character recognition; Adobe Acrobat XI Pro 11.0.00 - software package for creating and viewing electronic publications in PDF; WinDjView 2.0.2 - a program for recognizing and viewing files with the same format DJV and DjVu.

In order to provide special conditions for the education of persons with disabilities all buildings are equipped with ramps, elevators, lifts, specialized places equipped with toilet rooms, information and navigation support signs

### Internet resources

1. Journal "questions of balneology, physiotherapy and physical therapy" <http://www.mediasphera.ru/journals/kyrort/about/>
2. Journal "Medical rehabilitation, balneology, physiotherapy" [http://kurort.gov.ua/publication/meditsinskaya\\_reabilitatsiya\\_kurortologiya\\_fizioterapiya](http://kurort.gov.ua/publication/meditsinskaya_reabilitatsiya_kurortologiya_fizioterapiya)
3. Journal "Sports medicine: science and practice" <http://xn--htbc1aifim.xn--p1ai/>
4. Journal "Medicine and Sport" <http://www.npc-intelforum.ru/medsport/>

## **VI. GUIDELINES FOR STUDYING OF THE DISCIPLINE**

The purpose of practical training is to consolidate the knowledge gained by students in lectures, modeling of practical situations, as well as checking the effectiveness of independent work of residents.

The practical classes usually include an oral questioning of participants on the seminar. This reveals the degree of students' knowledge of the material of the lecture course, basic textbooks, knowledge of current problems and the current situation in the modern educational space. Next, the ability of students to apply their theoretical knowledge to solving a practical or problem is revealed.

Preparation for practical classes is advisable to start with a repetition of the material of lectures. It should be borne in mind that the lecture course is limited in time and does not allow the lecturer to consider in detail all aspects of the issue under study. Therefore, it is required to expand knowledge both theoretical and practical. At the same time, lectures give a good guide to the student to find additional materials, as they set a certain structure and logic of studying a particular issue.

In the course of independent self-work, the student must first study the material presented in the recommended department and/or teacher of educational literature and monographs. Students should pay attention to the fact that the library list includes not only basic textbooks, but also more in-depth sources on each topic of the course. Consistent study of the subject allows the student to form a stable theoretical base.

An important part of the preparation for practical classes is the work of students with scientific and analytical articles that are published in specialized periodicals. They allow you to broaden your horizons and get an idea of current problems, possible ways to solve them and/or trends in the study area.

As a final step in preparing for the practical lesson, the student should be encouraged to review the results of research relevant to each topic.

## VII. LOGISTICS DISCIPLINE

For practical work, as well as for the organization of independent work, students have access to the following laboratory equipment and specialized classrooms that meet the current sanitary and fire regulations, as well as safety requirements during training and scientific and industrial works:

<b>Name of the equipped rooms and rooms for independent work</b>	<b>List of main equipment</b>
The computer class of the School of biomedical AUD. M723, 15 work placts	<p>Screen, electrically 236*147 cm to trim the screen; Projector DLP technology, 3000 ANSI LM, WXGA with 1280x800 resolution, 2000:1 Mitsubishi EW330U; Subsystem of specialized mounting equipment course-2007 Tuarex; Subsystem of videocommunity: matrix switch DVI and DXP 44 DVI Pro advertising; extension cable DVI over twisted pair DVI 201 TX/RX advertising; Subsystem of audiocommentary and sound; speaker system for ceiling si 3ct LP Extron on from; digital audio processor DMP 44 LC the Extron; the extension for the controller control IPL T CR48; wireless LAN for students is provided with a system based on 802.11 a/b/g/N 2x2 MIMO(2SS) access points.</p> <p>Monoblock HP Loope 400 all-in-one 19.5 in (1600x900), core i3-4150t, 4GB DDR3-1600 (1x4GB), 1TB HDD 7200 SATA, and a DVD+ / -RW, GigEth, Wi-Fi and BT, the USB port of roses/MSE, Win7Pro (64-bit)+Win8.1Pro(64-bit), 1-1-1 Wty</p>
Multimedia audience	<p>Monoblock Lenovo C360G-i34164G500UDK; projection Screen Projecta Elpro Electrol, 300x173 cm; Multimedia projector, Mitsubishi FD630U, 4000 ANSI Lumen 1920 x 1080; Flush interface with automatic retracting cables TLS TAM 201 Stan; Avervision CP355AF; lavalier Microphone system UHF band Sennheiser EW 122 G3 composed of a wireless microphone and receiver; Codec of videoconferencing LifeSizeExpress 220 - Codeconly - Non-AES; Network camera Multipix MP-HD718; Two LCD panel, 47", Full HD, LG M4716CCBA; Subsystem of audiocommentary and sound reinforcement; centralized uninterrupted power supply</p>
Reading rooms of the Scientific library of the University open access Fund (building a - 10)	<p>Monoblock HP Loope 400 All-in-One 19.5 in (1600x900), Core i3-4150T, 4GB DDR3-1600 (1x4GB), 1TB HDD 7200 SATA, DVD+/-RW, GigEth, wifi, BT, usb kbd/mse, Win7Pro (64-bit)+Win8.1Pro(64-bit), 1-1-1 Wty Speed Internet access 500 Mbps. Jobs for people with disabilities equipped with displays and Braille printers.; equipped with: portable reading devices flatbed texts, scanning and reading machines videovelocity with adjustable color</p>

	spectrums; increasing electronic loops and ultrasonic marker
Accreditation-simulation center of the school of Biomedicine	





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**SCHOOL OF BIOMEDICINE**

**TRAINING AND METHODOLOGICAL SUPPORT OF INDEPENDENT  
WORK OF STUDENTS**

**on discipline «Medical rehabilitation»**

**Direction of training (specialty) 31.05.01 General medicine**

**Form of training: full-time**

Vladivostok

2018

### Schedule of independent work on the academic discipline

N p/p	Date / Deadline	Type of independent work	Estimated time to complete (hour)	Form of control
5 semester				
1	2-3 weeks	Essay Individual task	14	EO-3-Report, speaking on the practical class
2	4-15 weeks	Presentation on the essay Presentation of the results of an individual task	20	EO-3-Report, speaking on the practical class
3	17-18 weeks	Preparing to exam	20	EO-1-Interview PW-1 - Test

#### Topics of presentations and essays:

1. Radiation signs of traumatic injuries of bones, joints and maxillofacial area;
2. Radiation signs of osteomyelitis, benign and malignant diseases of maxillofacial area;
3. Radial symptoms of diseases of the lungs and heart;
4. Radial symptoms of diseases of the digestive system;
5. Radiation signs of "urgent conditions»;
6. Radial symptoms of diseases of the liver and gallbladder;
7. Ray signs of the disease in nephrology and urology;
8. Radiation signs of caries, periodontitis and periodontal disease;
9. Contrast research methods in dentistry.
10. CT, MRI studies in diseases of the dental system.
11. Radiation diagnosis of diseases of the salivary glands.
12. Endophytic cancer of the stomach (x-ray characteristics, research methods).
13. Complication of gastric ulcer.
14. X-ray signs of gastritis.
51. Methods of study of the stomach (study phase).

## **Guidelines for writing and design of an essay**

Essay is a creative activity of the student reproducing in its structure the research activities to solve theoretical and applied problems in a particular branch of scientific knowledge. That is why the course certification work is an essential component of the educational process in higher education.

The essay is a model of scientific research, independent self-work in which a student solves a problem of a theoretical or practical nature, applying the scientific principles and methods of a given branch of scientific knowledge. The result of this scientific search may have not only subjective, but also objective scientific novelty, and therefore can be presented for discussion by the scientific community in the form of a scientific report or presentation at scientific-practical conferences, as well as in a form of research article.

Essay involves the acquisition of skills for building business cooperation, based on ethical standards of scientific activity. Purposefulness, initiative, disinterested cognitive interest, responsibility for the results of their actions, conscientiousness, competence - personality traits that characterize the subject of research activities corresponding to the ideals and norms of modern science.

The essay is an independent educational and research activity of the student. The teacher assists in a consultative manner and assesses the process and the results of the activity. Teacher provides an approximate topic of the essay work, specifies the problem and topic of research with a student or intern, helps to plan and organize research activities, assigns time and a minimum number of consultations.

The teacher receives the text of the essay for verification at least ten days before the defense.

Generally there is a certain structure of the essay, the main elements of which in order of their location are the following:

1. Title page.
2. Goal.
3. Table of Contents

4. List of abbreviations, symbols and terms (if necessary).
5. Introduction.
6. Main part.
7. Conclusion.
8. Reference list.
9. Appendixes.

The title page contains educational institution, graduating department, author, teacher or supervisor, research topic, place and year of the essay.

The title of the essay should be as short as possible and fully consistent with its content.

The table of contents (content) reflects the names of the structural parts of the essay and the pages on which they are located. The table of contents should be placed at the beginning of work on one page.

The presence of a detailed introduction - a mandatory requirement for the abstract. Despite the small volume of this structural part, its preparation causes considerable difficulties. However, this is a qualitatively executed introduction that is the key to understanding the entire work, which testifies to the professionalism of the author.

Thus, the introduction is a very crucial part of the essay. The introduction should start with a justification of the relevance of the chosen topic. As applied to the essay, the concept of "relevance" has one feature. From how the author of the essay can choose a topic and how correctly he understands and evaluates this topic from the point of view of modernity and social significance, characterizes his scientific maturity and professional preparedness.

In addition, in the introduction it is necessary to isolate the methodological basis of the essay, name the authors, whose works constituted the theoretical basis of the study. A review of the literature on the topic should show the author's thorough acquaintance with special literature, his ability to systematize sources, critically examine them, highlight the essential and determine the most important in the up-to-date state of knowledge of the topic.

The introduction reflects the importance and relevance of the chosen topic, defines the object and subject, purpose and objectives, and the chronological framework of the study.

The introduction ends with a statement of the general conclusions about the scientific and practical significance of the topic, the degree of its knowledge and sources, and the hypothesis being put forward.

The main part describes the essence of the problem, reveals the topic, determines the author's position, factual material is given as an argument and for display of further provisions. The author must demonstrate the ability to consistently present the material while analyzing it simultaneously. Preference is given to the main facts, rather than small details.

The essay ends with the final part called "conclusion". Like any conclusion, this part of the essay serves as a conclusion due to the logic of the study which is a form of synthesis accumulated in the main part of scientific information. This synthesis is a consistent, coherent presentation of the results obtained and their relation to a common goal and specific tasks set and formulated in the introduction. At this place there is a so-called "output" knowledge, which is new in relation to the original knowledge. The conclusion may include suggestions of practical matter, thereby increasing the value of theoretical materials.

So, the conclusion of the essay should contain: a) presents the conclusions of the study; b) theoretical and practical significance, novelty of the essay; c) indicated the possibility of applying the results of the study.

After conclusion it is acceptable to place the reference list of the literature used throughout. This list is one of the essential parts of the essay and reflects the independent creative work of the author of the essay.

The list of sources used is placed at the end of the work. It is made either in alphabetical order (by the name of the author or the name of the book), or in the order in which the references appear in the text of the prepared work. In all cases, the full title of the work, the names of the authors or the editor of publication are indicated if the writing team involved a group of authors, data on the number of

volumes, the name of the city and publisher in which the work was published, year of publication, number of pages.

### **Methodical recommendations for the presentation preparation**

For preparation of presentation it is recommended to use: PowerPoint, MS Word, Acrobat Reader, LaTeX-bev package. The simplest program for creation of presentations is Microsoft PowerPoint. To prepare a presentation, it is necessary to process the information collected while writing the essay.

The sequence of preparation of the presentation:

1. Clearly state the purpose of the presentation.
2. Determine what the presentation format will be: live presentation (then how long it will be) or e-mail (what will be the context of the presentation).
3. Select the entire content of the presentation and build a logical chain of presentation.
4. Identify key points in the content of the text and highlight them.
5. Determine the types of visualization (pictures) to display them on slides in accordance with the logic, purpose and specificity of the material.
6. Choose the design and format the slides (the number of pictures and text, their location, color and size).
7. Check the visual perception of the presentation.

The types of visualization include illustrations, images, charts, tables. The illustration is a representation of a real-life visual. The images - as opposed to illustrations - are metaphor. Their purpose is to cause an emotion and create an attitude towards it, to influence the audience. With the help of well-designed and presented images, information can remain permanently in a person's memory. Chart is visualization of quantitative and qualitative relationships. They are used for convincing data demonstration, for spatial thinking in addition to the logical one. Table is a specific, visual and accurate data display. Its main purpose is to structure information, which sometimes facilitates the perception of data by the audience.

### *Practical hints on preparing a presentation*

- printed text + slides + handouts are prepared separately;
- slides -visual presentation of information that should contain a minimum of text and maximum of images that bring a meaning, to look visually and simply;
- textual content of the presentation - oral speech or reading, which should include arguments, facts, evidence and emotions;
- recommended number of slides 17-22;
- mandatory information for the presentation: the subject, surname and initials of the speaker; message plan; brief conclusions from all that has been said; list of sources used;
- handout - should be provided with the same depth and coverage as the live performance: people trust more what they can carry with them than disappear images, words and slides are forgotten, and handouts remain a constant tangible reminder; handouts are important to distribute at the end of the presentation; Handouts should be different from slides, should be more informative.

### **Evaluation criteria for essays.**

The stated understanding of the essay as a holistic copyright text defines the criteria for its evaluation: the novelty of the text; the validity of the source choice; the degree of disclosure of the issue essence; compliance with the requirements for registration.

**Essay novelty:** a) the relevance of the research topic; b) novelty and independence in the problem formulation, formulation of a new aspect of the well-known problem in the establishment of new connections (interdisciplinary, intra-subject, integration); c) ability to work with research and critical literature, systematize and structure research material; d) the appearance of the author's position, independence of assessments and judgments; d) stylistic unity of the text, the unity of genre features.

**The degree of disclosure of the question essence:** a) the plan compliance with an essay; b) compliance with the content of topic and plan of an essay; c) completeness and depth of knowledge on the topic; d) the validity of the methods and techniques of work with the material; e) ability to generalize, draw conclusions, compare different points of view on one issue (problem).

**The validity of the source choice:** a) evaluation of the used literature: whether the most famous works on the research topic are involved (including recent journal publications, recent statistics, reports, references, etc.)

**Compliance with the requirements for registration:** a) How true are the references to the used literature, quotes; b) assessment of literacy and presentation culture (including spelling, punctuation, stylistic culture), knowledge of terminology; c) compliance with the requirements for the volume of essay.

**The reviewer should clearly state** the remarks and questions, preferably with references to the work (possible on specific pages of the work), to research and evidence that the author did not take into account.

**The reviewer may also indicate:** whether student has addressed the topic earlier (essays, written works, creative works, olympic works, etc.) and whether there are any preliminary results; how the graduate has conducted the work (plan, intermediate stages, consultation, revision and processing of the written or lack of a clear plan, rejection of the head recommendations).

**The student submits** an essay for review no later than a week before the defense. The reviewer is the teacher. Experience shows that it is advisable to acquaint the student with the review a few days before the defense. Opponents are appointed by the teacher from the students. For an oral presentation a student needs about 10–20 minutes (approximately as long as he answers with tasks for the exam).

**Grade 5** is given if all the requirements for writing and defending an essay are fulfilled: the problem is indicated and its relevance is justified, a brief analysis of different points of view on the problem under consideration is made and one's own position is logically presented, conclusions are formulated, the topic is fully



disclosed, the volume is met, external requirements are met design, given the correct answers to additional questions.

**Grade 4** is given if the basic requirements for the essay and its defense are met, but there are some shortcomings. In particular, there are inaccuracies in the presentation of the material; or there is no logical sequence in the judgments; not sufficient volume of the essay; there are omissions in the design; additional questions for the defense are accompanied with incomplete answers.

**Grade 3** is given if there are significant deviations from the requirements for referencing. In particular: the topic is covered only partially; factual errors in the content of an essay or when answering additional questions; there is no output c.

**Grade 2** - the topic of an essay is not disclosed, a significant misunderstanding of the problem is found.

**Grade 1** - student's essay is not presented.



MINISTRY OF EDUCATION AND SCIENCE OF THE RUSSIAN FEDERATION  
Federal state autonomous educational institution  
of higher education  
**« Far Eastern Federal University »**  
(FEFU)

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**SCHOOL OF BIOMEDICINE**

**ASSESSMENT FUND**  
**on discipline «Medical rehabilitation »**  
**Direction of training (specialty) 31.05.01 General medicine**  
**Form of training: full-time**

**Passport of the Fund Assessment Tools** is filled in accordance with the Regulations on the Funds of Evaluation Tools of Educational Programs of Higher Education - Bachelor's Programs, Specialties, FEFU Magistrates, approved by order of the Rector on 12/05/2015 No. 12-13-850.

<b>Competence and its code</b>	<b>Stages of competence formation</b>	
PC-1 the ability and willingness to implement a set of measures aimed at the preservation and promotion of health. It includes the formation of a healthy lifestyle, the prevention of occurrence and (or) the spread of diseases, their early diagnosis, the identification of their causes, as well as this set is aimed at elimination of harmful effects of environmental factors on human health	Knows	Principles of occurrence and (or) spread of diseases, their early diagnosis, identification of the causes and conditions for their occurrence and development,
	Is able to	To carry out a set of measures aimed at preserving and promoting health.
	Possesses	Skills in implementing activities aimed at preserving and promoting health
PC-5 the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases	Knows	Methods of history taking and interpretation of laboratory, instrumental, autopsy and other studies
	Is able to	Evaluate the results of history data, the results of the examination, laboratory, instrumental, autopsy and other studies
	Possesses	Skills of an assessment of data of the anamnesis, results of survey, laboratory, tool, pathoanatomical and other researches
PC-8 the ability to determining the tactics of patient surveillance with different nosological entities.	Knows	Nosological forms of the disease, the management of patients with various diseases
	Is able to	To provide the necessary medical care and rehabilitation measures in various nosological forms.
	Possesses	Skills of providing medical care and rehabilitation measures in various nosological forms
PC-14 the readiness for determining the need to use natural healing factors, the drug, non-drug therapy and other methods of treatment in patients who are in need of medical rehabilitation and sanatorium treatment	Knows	Basic rules of hygienic measures of well-being
	Is able to	Carry out hygiene measures of a health nature
	Possesses	Skills for teaching patients and their relatives basic hygienic measures of a health-improving nature, skills for self-monitoring of basic physiological indicators,
GPC-8 the readiness for medical use of	Knows	List of essential drugs and other substances and their combinations.

drugs and other medical substances and their combinations in solving professional problems	Is able to	To carry out the treatment of patients with the most common diseases of internal organs and rehabilitation measures
	Possesses	Modern methods of rational, individualized pharmacotherapy

## MONITORING THE ACHIEVEMENT OF THE COURSE OBJECTIVES

No.	Controlled sections / topics of disciplines	Codes and stages of the formation of competencies	Evaluation tools - name		
			No.	Controlled sections / topics of disciplines	
	<b>Module 1</b> General issues of medical rehabilitation <b>Module 2</b> Particular issues of medical rehabilitation	GPC-8 the readiness for medical use of drugs and other medical substances and their combinations in solving professional problems	Knows	EO-1 Interview	Questions of final control A semester - 1-36
			Is able to	PW-1 Test	PW-1 Test
			Possesses	EO-3 Report	EO2 Colloquium
	<b>Module 1</b> General issues of medical rehabilitation <b>Module 2</b> Particular issues of medical rehabilitation	PC-1 the ability and willingness to implement a set of measures aimed at the preservation and promotion of health. It includes the formation of a healthy lifestyle, the prevention of occurrence and (or) the spread of diseases, their early diagnosis, the identification of their causes, as well as this set is aimed at elimination of harmful effects of environmental factors on human health	Knows	EO-1 Interview	Questions of final control A semester - 1-36
			Is able to	PW-1 Test	PW-1 Test
			Possesses	EO-3 Report	EO2 Colloquium
	<b>Module 1</b> General issues of medical rehabilitation <b>Module 2</b> Particular issues of medical rehabilitation	PC-5 the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases	Knows	EO-1 Interview	Questions of final control A semester - 1-38
			Is able to	PW-1 Test	PW-1 Test
			Possesses	EO-3 Report	EO2 Colloquium
	<b>Module 1</b> General issues of medical rehabilitation <b>Module 2</b> Particular	PC-8 the ability to determining the tactics of patient surveillance with different	Knows	EO-1 Interview	Questions of final control A semester - 36-110
			Is able to	PW-1	PW-1

	issues of medical rehabilitation	nosological entities.		Test	Test
			Possesses	EO-3 Report	EO2 Colloquium
	<b>Module 1</b> General issues of medical rehabilitation <b>Module 2</b> Particular issues of medical rehabilitation	PC-14 the readiness for determining the need to use natural healing factors, the drug, non-drug therapy and other methods of treatment in patients who are in need of medical rehabilitation and sanatorium treatment	Knows	EO-1 Interview	Questions of final control A semester - 1-38
Is able to			PW-1 Test	PW-1 Test	
Possesses			EO-3 Report	EO2 Colloquium	

### The scale of assessment the level of formation of competences

Code and formulation of competence	Stages of the formation of competencies		Criteria	Indicators	Points
GPC-8: the readiness for medical use of drugs and other medical substances and their combinations in solving professional problems	Knows (the threshold level)	List of essential drugs and other substances and their combinations	Knowledge of essential drugs and other substances and their combinations	Formed and structured knowledge of essential drugs and other substances and their combinations	65-71
	Is able to (advanced)	To carry out the treatment of patients with the most common diseases of internal organs and rehabilitation measures	Ability to carry out the treatment of patients with the most common diseases of internal organs and rehabilitation measures	Ready and able to carry out the treatment of patients with the most common diseases of internal organs and rehabilitation measures	71-84
	Possesses (high)	Modern methods of rational, individualized pharmacotherapy	Formed skills of providing rational, individualized pharmacotherapy	Skills surely to provide rational, individualized pharmacotherapy	85-100
PC-1 the ability and willingness to implement a set of measures aimed at the preservation and promotion of health. It includes the formation of a healthy lifestyle, the prevention of occurrence and (or) the spread of diseases, their early diagnosis, the identification of their causes, as well as this set is aimed at elimination of	Knows (the threshold level)	Principles of occurrence and (or) spread of diseases, their early diagnosis, identification of the causes and conditions for their occurrence and development.	Knowledge of principles of occurrence and (or) spread of diseases, their early diagnosis, identification of the causes and conditions for their occurrence and development.	Formed and structured knowledge of principles of occurrence and (or) spread of diseases, their early diagnosis, identification of the causes and conditions for their occurrence and development.	
	Is able to (advanced)	To carry out a set of measures aimed at preserving and promoting health.	Ability to carry out a set of measures aimed at preserving and promoting health	Ready and able to carry out a set of measures aimed at preserving and promoting health	
	Possesses (high)	Skills in implementing activities aimed at preserving and	Formed skills in implementing activities aimed at preserving and	Skills surely to implement activities aimed at preserving and promoting	

harmful effects of environmental factors on human health		promoting health	promoting health	health	
PC-5: the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases	Knows (the threshold level)	Methods of history taking and interpretation of laboratory, instrumental, autopsy and other studies	Knowledge of methods of history taking and interpretation of laboratory, instrumental, autopsy and other studies	Formed and structured systematic knowledge of methods of history taking and interpretation of laboratory, instrumental, autopsy and other studies	65-71
	Is able to (advanced)	Evaluate the results of history data, the results of the examination, laboratory, instrumental, autopsy and other studies	Ability to evaluate the results of history data, the results of the examination, laboratory, instrumental, autopsy and other studies	Ready and able to evaluate the results of history data, the results of the examination, laboratory, instrumental, autopsy and other studies	71-84
	Possesses (high)	Skills of an assessment of data of the anamnesis, results of survey, laboratory, tool, pathoanatomical and other researches	Formed skills of an assessment of data of the anamnesis, results of survey, laboratory, tool, pathoanatomical and other researches	Skills surely to assess data of the anamnesis, results of survey, laboratory, tool, pathoanatomical and other researches	85-100
PC-8: the ability to determining the tactics of patient surveillance with different nosological entities.	Knows (the threshold level)	Nosological forms of the disease, the management of patients with various diseases	Knowledge of nosological forms of the disease, the management of patients with various diseases	Formed and structured systematic knowledge of nosological forms of the disease, the management of patients with various diseases	65-71
	Is able to (advanced)	To provide the necessary medical care and rehabilitation measures in various nosological forms.	Ability to provide the necessary medical care and rehabilitation measures in various nosological forms.	Ready and able to provide the necessary medical care and rehabilitation measures in various nosological forms.	71-84
	Possesses (high)	Skills of providing medical care and rehabilitation measures in various nosological forms	Formed skills of providing medical care and rehabilitation measures in various nosological forms	Skills surely to provide medical care and rehabilitation measures in various nosological forms	85-100
PC-14 the readiness for determining the need to use natural healing factors, the drug, non-drug therapy	Knows (the threshold level)	Basic rules of hygienic measures of well-being	Knowledge of basic rules of hygienic measures of well-being	Formed and structured systematic knowledge of basic rules of hygienic measures of well-being	65-71

and other methods of treatment in patients who are in need of medical rehabilitation and sanatorium treatment	Is able to (advanced)	Carry out hygiene measures of a health nature	Ability to carry out hygiene measures of a health nature	Ready and able to carry out hygiene measures of a health nature	71-84
	Possesses (high)	Skills for teaching patients and their relatives basic hygienic measures of a health-improving nature, skills for self-monitoring of basic physiological indicators	Formed skills for teaching patients and their relatives basic hygienic measures of a health-improving nature, skills for self-monitoring of basic physiological indicators	Skills surely to Teach patients and their relatives basic hygienic measures of a health-improving nature, skills for self-monitoring of basic physiological indicators	85-100

### Questions for assessing prior competencies

### Questions to assess preliminary competencies

**Control tests** are designed for students studying the course "Medical rehabilitation". Tests are necessary for both the control of knowledge in the process of the current interim certification, and for the assessment of knowledge, the result of which can be set off.

When working with tests, the student is asked to choose one answer out of three or four proposed. At the same time, the tests vary in their complexity. There are tests among the proposed ones containing several options for correct answers. The student must provide all correct answers.

Tests are designed for both individual and collective solutions. They can be used in the process and classroom, and independent self-work. The selection of tests necessary for the control of knowledge in the process of interim certification is made by each teacher individually.

Results of performance of the test tasks are evaluated by a teacher using a five-grade scale for certification or on system "credit" - "no credit". Grade "excellent" is given if the number of correct answers is more than 90% of the tests offered by the teacher. Grade "good" is given if the number of correct answers is more than 70% of the tests. Grade "satisfactory" is given if the number of correct answers is more than 50% of the tests offered to the student.

## **Examples of the test tasks**

**001. General contraindications in physical therapy include all of the above, except**

- a) Hypostatic pneumonia and myocardial infarction
- b) Bleeding
- c) high body temperature
- d) Metastatic tumors

**002. The temperature of the water in the pool for training in diseases of the internal organs should be**

- a) up to 20°
- b) from 21° to 23°
- c) 24° to 26°
- d) from 26° to 32°
- e) above 36°

**003. The greatest activity of the solar spectrum rays of the human body**

- a) Ultraviolet radiation
- b) Violet radiation
- c) Infrared radiation
- d) Red and yellow radiation
- e) Correct ultraviolet radiation and infrared radiation

**004. Specify the contraindication to galvanization:**

- a) chronic colitis;
- b) bronchial asthma;
- c) radiculitis;
- d) common eczema.



**005. The energy of millimeter waves is well absorbed:**

- a) subcutaneous fat;
- b) leather;
- c) muscles.

**006. The mechanism of action of aeroionotherapy is based on:**

- a) ionization process;
- b) polarization process;
- c) the electrolysis process.

**007. In laser therapy is used:**

- a) mechanical energy;
- b) magnetic field;
- c) light energy;
- d) high frequency electromagnetic oscillations.

**008. Visible rays exert on the body:**

- a) thermal effect;
- b) bactericidal effect;
- c) analgesic effect;
- d) spasmodic effect.

**009. Magnetic therapy is used:**

- a) only for naked areas of the body;
- b) only through clothes, bandages;
- c) on the naked surface and through clothing.

### **Examples of case study tasks**

#### **Case study task No. 1.**

Patient M. appealed to the dentist complaining of acute pain in the region of 4th tooth of the lower jaw on the right. The examination revealed a cavity in the 4th tooth on the right.

**Questions:**

- 1.What additional research methods should be carried out?
- 2.How is this method carried out?
- 3.What physical treatments can be used?

**Answers:**

- 1.EOD for differential diagnostics of caries, pulpitis, periodontitis.
- 2.EOD is carried out from the bottom of the carious cavity.
- 3.After opening the cavity with pulpitis, diathermocoagulation is carried out

**Case study task No. 2.**

Woman 45 years old applied to the dentist with complaints of pain in the brow bone and corner of the eye, pain sharp, barely relieved. From the medical history it became clear that the patient was driving a lot with an open window. Objectively: swelling in the area of 1 branch of the trigeminal nerve, defibrillator temperature, pressure soreness.

**Questions:**

- 1.What diagnosis can be made?
- 2.What physical factors can be used in this condition?
- 3.How to conduct physio procedures?

**Answers:**

- 1.Neuritis of the 1 branch of the trigeminal nerve.
- 2.You can use UHF, DMV, ultraviolet irradiation in erythema doses UPP hydrocortisone and dipyrone.
- 3.Electrophoresis is carried out through the bergonier half-mask. UHF therapy on the transverse technique labetalol dose. Ultraphonophoresis is carried out by contact labile technique. Contact medium - ointment aq hydrocortisone and

dipyrrone. Power of 0.05-0.2 W/cm square 4 min. during the 1 branch of the trigeminal nerve.

### **Case study task No 3.**

The patient of 22 years old complained about the presence of white spots on the teeth of the upper jaw, which appeared after the removal of orthodontic structures. About 8 months have been wearing bracket system. In the first 6 months carefully cleaned his teeth, following all the recommendations of the orthodontist. Last 2 months. Against removal of the bracket system held at the military training camp, where he did not pay due attention to oral hygiene. When viewed on the vestibular surfaces in the cervical region of the teeth 41,42, 31,32,34 there are white spots with a size of 2\3mm, with a rough surface.

#### **Questions:**

- 1.What physical method should be used in the system of rehabilitation of this disease?
- 2.How is this method carried out?

#### **Answers:**

- 1.Electrophoresis of a solution of fluoride натрия1% and 2.5% solution of calcium glycerophosphate.
- 2.Drugs are introduced with the help of special disk electrodes 1% sodium fluoride solution, introduced from the negative pole, and 2.5% calcium glycerophosphate solution from the positive pole. From the beginning, the tooth enamel is saturated with calcium and then sodium fluoride.

### **Case study task No 4**

Patient 64 years old turned with complaints of chewing disorders, pain when chewing, loose teeth. The examination revealed pathological pockets. Gums whitish hue, the roots are bare.

#### **Question:**

- 1.What additional diagnostic method can be used?

2. What physical factor can be used to remove Tartar?
3. What modern method can be used?

**Answers:**

1. Sample Kulapsenko. Vacuum massage
2. Low-frequency ultrasound.
3. Photodynamic therapy.

*Evaluation criteria for the decision of case study tasks:*

"grade 5" is given to a student if he/she gives the correct answers to the discussed questions which differ in depth and completeness of disclosure of a subject, is able to draw conclusions and generalizations to give the reasoned answers which are logical and consecutive.

"grade 4" is assigned to the student if he/she is on the issues under discussion provides the right answers, is the depth and completeness of the topic, knows how to make conclusions and generalizations, but with one or two mistakes in the answers acceptable.

"grade 3" is given to a student if he/she gives answers to the discussed questions disclosing them insufficiently, there is no logical construction of the answer, several mistakes are accessible.

"grade 2" is set for a student if he/she gives answers to the discussed questions showing that student does not master the material of the topic, cannot give reasoned answers, serious errors in the content of the answer are made.

**Individual task**

An individual task is formed together with the student on the topic of the lesson

Evaluation criterion:

Credited-the student has completed an individual task

Fail – student failed to perform an individual task

## **Evaluation tools for interim certification**

### **Questions to credit**

1. The concept of rehabilitation
2. Purpose, objectives and basis of rehabilitation
3. Stages of rehabilitation
4. Basic principles of rehabilitation
5. Aspects of rehabilitation
6. Professional aspect of rehabilitation
7. State of the labour market for persons with disabilities
8. State of the art in the field of education of persons with disabilities
9. The concept of vocational rehabilitation of persons with disabilities and its structure
10. Issues of psychological rehabilitation
11. Psychoprophylaxis
12. Creative rehabilitation as a way of adaptation of disabled children in society
13. Pedagogical rehabilitation
14. Physical rehabilitation as an integral part of medical, labor and social rehabilitation
15. Physical rehabilitation as a complex process: therapeutic massage, physiotherapy, phytotherapy, food hygiene, tempering procedures
16. Toning and trophic effect of exercise
17. Family rehabilitation
18. Household rehabilitation
19. The concept of medical rehabilitation as a system of socio-economic, medical, psychological measures
20. Differentiation of physical activity depending on the type of pathology and the patient's condition. Control of the impact of loads and the patient's condition in the process of rehabilitation.
21. Structure and organization of rehabilitation centers
22. General characteristics of complex and individual rehabilitation programs

23. Organization of rehabilitation in hospitals, clinics, sanatoria, rehabilitation centers.
24. Adaptive physical culture is an effective means of rehabilitation of disabled people
25. History of the emergence of adaptive sports
26. The expediency of using adaptive sports
27. Adaptation of the sport on a global level
28. Development of adaptive sports in Russia
30. The state's contribution to the development of sports among disabled people
31. Tasks and activities of primary and secondary prevention of diseases.
32. Diseases of civilization and their causes.
33. Goals and objectives of medical examination of the population.
34. Basic principles of preventive medicine.
35. Diseases with hereditary predisposition.
36. Therapeutic and prophylactic measures in case of hereditary pathology.
37. Therapeutic and preventive measures for stress reactions.
38. Basic principles of rehabilitation of patients, disabled persons and their families.
39. Basic principles of medical deontology and ethics.
40. Conditions conducive to optimal contact of the doctor (coach, caregiver) with sick (disabled) and members of their families.
41. International system of rehabilitation.
42. Map of individual rehabilitation program for disabled people.