



MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE RUSSIAN FEDERATION  
Federal State Autonomous Educational Institution of Higher Education  
**"Far Eastern Federal University"**  
(FEFU)  
INSTITUTE (SCHOOL) OF LIFE SCIENCES AND BIOMEDICINE (SCHOOL)

AGREED  
Head of OP

(signature)

December 21, 2021



Yu.S. Khotimchenko  
(FULL NAME)

APPROVE

Director of the Department of Pharmacy and Pharmacology

E.V. Khozhaenko  
(signature) (I.O. Surname)

December 21, 2021

**WORKING PROGRAM OF THE DISCIPLINE**  
Health of the region's population and health priorities  
Area of study 32.04.01 Public health

Master's program "Leadership and governance in public health (program in English for foreign citizens)"  
Form of training: full-time

course 2 semester 3

lectures at 6 p.m.

practical classes 36 hours.

seminars are not included

including using MAO lek. 6 hours / pract. 10 o'clock

total classroom hours 54 hours.

including using MAO 16 hours

independent work 126 hours,

including preparation for the exam - 54 hours.

exam 3rd semester

The work program was compiled in accordance with the requirements of the Federal State Educational Standard in the field of study 32.04.01 Public Health, approved by order of the Ministry of Education and Science of Russia dated 31.05.2017 No. 485.

The work program was discussed at the meeting Department of Pharmacy and Pharmacology, Protocol No. 4 dated December 21, 2021

Director of the Department Ph.D., E.V. Khozhaenko

Compiled by: Doctor of Medical Sciences, Ph.D., Professor Kiku P.F., Doctor of Medical Sciences, Associate Professor Sklyar L.F.

Reverse side of the title page of the RPD

1. The work program was revised at a meeting of the Department / department / department (implementing the discipline) and approved at a meeting of the Department / department / department (issuing structural unit), protocol dated “ \_\_\_\_ ” \_\_\_\_\_ 2021 No. \_\_\_\_\_

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## I. Goals and objectives of mastering the discipline:

### Target:

obtaining theoretical knowledge by masters and mastering practical skills in the organization of health care and public health, in the provision of primary health care, emergency, emergency, specialized, high-tech medical care in the conditions of modernization and informatization in the field of professional activity, taking into account the system of general cultural and professional competencies capable of independent professional activity and effective management of medical organizations.

### Tasks:

- Mastering practical research skills - from collecting information to calculating a system of indicators characterizing the state and patterns of development of public health.
- Formation of the necessary knowledge and skills to use modern basic computer technologies as a tool for predicting the state of public health and health indicators of the region.
- Instilling the skills of searching and processing information to ensure
- accessibility of medical care and improving the compliance of medical services with the level of morbidity, mortality, the needs of the population and the advanced achievements of medical science.
- Maximum use in the work of the requirements of the governing documents in the organization of events on social policy, public health, organization and management of health care.

As a result of studying this discipline, students form the following universal, general professional and professional competencies (elements of competencies).

### Professional competencies of graduates and indicators of their achievement:

Task type	Code and name of professional competence (result of development)	Code and name of the indicator of achievement of competence
organizational and managerial	PC-3 The ability to organize, plan and control the activities of a structural unit of a medical organization	PC-3.1 Knows the standards of medical care PC-3.2 Knows how to assess the resources of a medical organization and implement a quality management system PC-3.3 Possesses the necessary skills for compiling reporting documentation, evaluating the activities of a healthcare institution

Task type	Code and name of professional competence (result of development)	Code and name of the indicator of achievement of competence
organizational and managerial	PC-5 The ability to evaluate the effectiveness of the activities of a medical organization, develop and select optimal management decisions, develop a business plan for the development of a medical organization, use a process approach in managing a medical organization, use technological maps of the processes of a medical organization	PC-5.1 Knows the methods of planning a medical organization PC-5.2 Able to draw up a plan for a medical organization, develop business planning and investment projects PC-5.3 Proficient in planning, developing business planning and investment projects

Code and name of the indicator of achievement of competence	Name of the assessment indicator (the result of training in the discipline)
PC-3.1 Knows the standards of medical care	Knows the standards of medical care Able to provide first aid Proficient in first aid
PC-3.2 Knows how to assess the resources of a medical organization and implement a quality management system	Knows the quality management system of a medical organization Knows how to evaluate the resources of a medical organization and implement a quality management system Possesses the skill of assessing the resources of a medical organization and implementing a quality management system
PC-3.3 Possesses the necessary skills for compiling reporting documentation, evaluating the activities of a healthcare institution	Knows the reporting documentation of the medical organization Able to prepare reporting documentation of a medical organization Possesses the necessary skills for compiling reporting documentation, evaluating the activities of a healthcare institution
PC-5.1 Knows the methods of planning a medical organization	Knows the methods of planning a medical organization Able to plan the work of a medical organization
PC-5.2 Able to draw up a plan for a medical organization, develop business planning and investment projects	Knows the rules for drawing up a plan for a medical organization, develop a business plan, an investment project Able to draw up a plan for a medical organization, develop business planning and investment projects Has the skill of drawing up a plan for a medical organization, developing business and investment projects
PC-5.3 Proficient in planning, developing business planning and investment projects	Knows the principles of goal-setting, types and methods of organizational planning and fundamental concepts of financial management, as well as the method of a process approach to managing a medical organization Able to develop corporate, competitive and functional strategies for the development of the organization, develop investment projects and conduct their verification

	He owns the methods of formulating and implementing strategies at the business unit level, developing and implementing marketing programs, as well as methods of investment analysis and analysis of financial markets, a process approach in managing a medical organization and the ability to use flow charts of the processes of a medical organization.
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For the formation of the above competencies within the discipline "Health of the region's population and health priorities", the following methods of active / interactive learning are used: lectures - conferences, problematic lectures, visualization lectures; practical exercises - debate, round table (preparation and discussion of abstracts).

## II. The complexity of the discipline and types of training sessions in the discipline

The total labor intensity of the discipline is 5 credit units (180 academic hours).

(1 credit unit corresponds to 36 academic hours)

Designation	Types of training sessions and work of the student
Lek	Lectures
Lek electr.	
Etc	Practical lessons
Right electr.	
SR:	Independent work of the student during the period of theoretical training
including control	Independent work of the student and contact work of the student with the teacher during the period of intermediate certification
	And other types of work

### I. Discipline structure:

#### Full-time form of education

N o.	Section name disciplines	Se me ster	The number of hours by type of training sessions and work of the student						Forms of intermediate certification
			Lek	lab	Etc	OK	SR	Cont rol	
1	Section 1 Methods for studying sources of environmental pollution and public health	3	8		18		36	54	

2	Section 2 Protective systems of the body and protection of a person from the harmful effects of the external environment		10		18		36		
	Total:	3	18	-	36	-	72	54	Exam

### III. STRUCTURE AND CONTENT OF THE THEORETICAL PART OF THE COURSE

(18 hours, including using MAO - 6 hours)

#### **Topic 1. Health and safety of the environment. Introduction. Subject, goals and objectives (4 hours)**

Speech by academician Grigoriev A.I. "Health and Safety of the Environment". Environmental Safety Program (BOS). OECD: brief data. History of the BPH Program.

#### **Topic 2. Environmental, social and hygienic risks to health. OECD Environment and Health Security Program (4 hours)**

OECD Testing Guidelines. OECD Rules for Good Laboratory Practice. Participation of non-OECD economies.

#### **Topic 3. New chemicals. Health risk assessment. Nano- and biotechnologies(4 hours)**

Influence of existing chemicals. Specialized database of chemicals. Globally Harmonized System for the Classification and Labeling of Chemicals (GHS).

#### **Topic 4. Key health indicators(2 hours)**

Nomenclature and classification of diseases. Forecasting the main indicators of public health (morbidity, mortality, including infant mortality, average life expectancy).

#### **Topic 5. Formation of population groups with an increased risk of pathology. Forecasting social and hygienic phenomena. (4 hours)**

Multifactorial socio-hygienic grouping of settlements and territories. Comprehensive assessment of the performance of the health care system. Modeling health indicators of the population.

### IV. STRUCTURE AND CONTENT OF THE PRACTICAL PART OF THE COURSE AND INDEPENDENT WORK

Practical classes (36 hours, including using MAO - 10 hours)

## **Section 1. Methods for studying sources of environmental pollution and public health (18 hours)**

**Lesson 1.** Research methods used to assess the health status of the population and the environment. Methods of studying, assessing the health of the population and healthcare (2 hours)

1. Methodology of research on the assessment of population health.
2. The study of health based on the results of official socio-hygienic and clinical sociological research.
3. Preventive healthcare.
4. Theoretical foundations of clinical examination

### **Lesson 2. Pollution of the hydrosphere: sources and consequences(2 hours)**

1. The relationship between the parameters of the hydrosphere and the health of the population.
2. Basic medical and preventive measures.
3. Study of the health status of the population in order to preserve, strengthen and restore it;
4. Use and analysis of information about the health of the population and the activities of medical and preventive and sanitary institutions to propose measures to improve the quality and efficiency of medical and preventive care;
5. Application of statistical analysis methods as a tool for understanding social phenomena

### **Lesson 3. Atmospheric pollution: sources and consequences(2 hours)**

1. Analysis of the influence of atmospheric pollution on the morbidity rates of the population.
2. Basic medical and preventive measures.
3. Demographic indicators of public health due to air pollution, health parameters, indicators.
4. Morbidity. Concept, methods of accounting and study of morbidity. Types of morbidity by negotiability. ICD-X.
5. The most important socially significant diseases of our time.

### **Lesson 4. Soil pollution: sources and consequences(2 hours)**

1. Influence of the state of the soil on the morbidity rates of the population.
2. Basic medical and preventive measures.

### **Class5. Radioactive Contamination and Health(2 hours)**

1. Influence of radiation on the morbidity rates of the population.
2. Basic medical and preventive measures.
3. Features of medical care for people with radionuclide damage.

4. The role of the primary medical and sanitary and stationary level in providing assistance to those affected by radioactive radiation and taking measures to prevent the consequences in the city (settlement, region).

5. Sanitary welfare of the population.

#### **Class 6. Electro-magnetic radiation and health (2 hours)**

1. Cellular communications - a negative impact. Myth or reality.

2. Principles of protection and prevention when exposed to electromagnetic radiation.

3. Modern problems of prevention.

4. The role of hygienists and epidemiologists in primary and secondary prevention.

#### **Lesson 7. Transport as a source of environmental pollution (2 hours)**

1. Types of environmental and hygienic pollution from transport.

2. Relationship between transport pollution and morbidity rates.

#### **Lesson 8. The impact of man-made emergencies, wars on the quality of the environment and public health (2 hours)**

1. Health problems in conditions man-made emergencies.

2. Priority measures of the healthcare system to ensure the preservation of public health.

#### **Lesson 9. Ecological living conditions and human health (2 hours)**

1. Main environmental factors and public health.

2. Priority measures to preserve the health of the population.

#### **Section 2. Protective systems of the body and protection of a person from the harmful effects of the external environment (18 hours)**

##### **Lesson 10. Defense systems of the human body. Adaptations to extreme conditions (2 hours)**

1. Problems of human adaptation to adverse and extreme environmental conditions.

2. Development of medical and protective regimes.

##### **Lesson 11. Technological civilization and human health. The impact of various pollution on the main indicators of public health (2 hours)**

1. Basic pollution and morbidity rates of the population.

2. The problem of human survival in terms of technological progress.

3. Environmental factors and health. Modern problems of ecology.

##### **Lesson 12. Calculation of indicators of load on the human environment (2 hours)**

1. Calculate the Demographic Impact Index. Determine the demographic capacity of the territory.

2. Calculate the indicator of environmental and hygienic impact.



3. Calculate the socio-hygienic impact indicator.

**Lesson 13. Monitoring.** The concept of sustainable development. MAO - Round table (2 hours)

1. The history of the concept of "sustainable development"
2. Factors of sustainable development
3. Strategies and principles of sustainable development (Rio-1992, 2002).
4. International cooperation to ensure sustainable development.

**Lesson 14. Conducting an examination of chemical enterprises.**

**MAO - visualization (workshop) (2 hours)**

Visit to the examination laboratory of the Center for Hygiene and Epidemiology.

**Lesson 15. Safety of using new bio- and nanotechnologies (2 hours)** MAO - "Center for Hygiene and Epidemiology", FEFU NANO-Center.

1. Toxicological and hygienic assessment of nanoparticles in various media.
2. Sanitary and hygienic assessment of biologically active substances, GMOs.

**Lesson 16. Protection of a person from the impact of adverse physical factors of the environment (2 hours)**

1. Development of treatment and prevention programs for the preservation of public health.
2. The healthcare system as a priority for protecting the population.
3. Indicators of reproduction of generations. Their levels and dynamics.

**Lesson 17. Mortality of the population. Age and sex characteristics. Methodology for calculating indicators. Levels. Their evaluation (2 hours)**

1. The structure of the causes of death of the population. Factors that determine its dynamics.
2. Infant mortality, its causes. Measures to reduce infant mortality.
3. Infant mortality rate. Age features of infant mortality. Method of calculation. Levels, their evaluation.
4. Early infant mortality. Method of calculation. Causes. Measures to reduce it.
5. perinatal mortality. Method of calculation. Measures to reduce it.
6. Average life expectancy of generations. Definition, calculation technique. Level dynamics.
7. Regional differences in levels of average life expectancy for men and women. factors that determine them.
8. Natural population growth. Methodology for calculating indicators.
9. Assessment of demographic indicators and their dynamics in various socio-economic conditions.

## **Lesson 18. Morbidity of the population. Risk factors. Accounting system (2 hours)**

1. Methods for studying the incidence of the population. Their comparative characteristics.
2. Nomenclature and classification of diseases, injuries and causes of death: significance in the practice of a doctor, basic principles of construction.
3. Methodology for studying general morbidity by negotiability. Documentation. Methodology for calculating indicators. Levels, their evaluation.
4. Methodology for studying morbidity with temporary disability. Documentation. Methodology for calculating indicators.
5. Methods for studying morbidity with the most important non-epidemic diseases. Features of registration. Documentation.
6. Methods of studying infectious morbidity. Documentation.

### **Schedule for the implementation of independent work on the discipline**

<b>No. p/p</b>	<b>Date/Due dates</b>	<b>Type of independent work</b>	<b>Approximate lead times</b>	<b>form of control</b>
1	2-6 weeks	Preparation of abstracts	36 hours	UO-3-Report, message
2	7-16 weeks	Presentation preparation	36 hours	UO-3-Report, message
3	17-18 week	Exam preparation	54 hours	UO-1-Interview PR-1 - Test Exam

Independent work of students consists of preparing for practical classes, working on recommended literature, writing reports on the topic of the seminar, preparing presentations, abstracts.

The teacher offers each student individual and differentiated tasks. Some of them can be carried out in a group (for example, preparing a report and presentations on the same topic can be done by several students with a division of their duties - one prepares a scientific and theoretical part, and the second analyzes practice).

Tasks and guidelines for independent work provide the preparation of reports.

### **Recommendations for independent work of students**

The purpose of the student's independent work is to work meaningfully and independently first with educational material, then with scientific information, lay the foundations for self-organization and self-education in order to instill the ability to continuously improve their professional qualifications in the future.

The process of organizing independent work of students includes the following stages:

- preparatory (defining goals, drawing up a program, preparing methodological support);
- the main one (implementation of the program, use of methods of information search, assimilation, processing, application, transfer of knowledge, fixing the results, self-organization of the work process);
- final (assessment of the significance and analysis of the results, their systematization, evaluation of the effectiveness of the program and methods of work, conclusions about the directions of labor optimization).

In the process of independent work, the student acquires the skills of self-organization, self-control, self-government, self-reflection and becomes an active independent subject of educational activity. Independent work of students should have an important impact on the formation of the personality of a future specialist; it is planned by the student independently. Each student independently determines the mode of his work and the measure of labor expended on mastering the educational content in each discipline. He performs extracurricular work according to a personal individual plan, depending on his preparation, time and other conditions.

### **Methodological recommendations for independent work of students**

As the material is mastered on the subject of the discipline, it is envisaged to carry out independent work of students in collecting and processing literary material to expand the field of knowledge in the discipline being studied. To study and fully master the program material in the discipline, educational, reference and other literature recommended by this program, as well as specialized periodicals, are used.

In self-preparation, students take notes on the material, independently study questions on the topics covered, using educational literature from the proposed list, periodicals, scientific and methodological information, databases of information networks (Internet, etc.).

Independent work consists of such types of work as work with lecture notes; studying material from textbooks, reference books, videos and presentations, as well as other reliable sources of information; exam preparation.

### **Guidelines for writing and designing an abstract**

An abstract is a creative activity of a master, which reproduces in its structure research activities to solve theoretical and applied problems in a certain branch of scientific knowledge. Because of this, term paper is the most important component of the educational process in higher education.

The abstract, being a model of scientific research, is an independent work in which the master solves a problem of a theoretical or practical nature, applying the scientific principles and methods of this 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 message at a scientific and practical conference, as well as in the form of a scientific article.

The abstract involves the acquisition of skills in building business cooperation based on ethical standards for the implementation of scientific activities. Purposefulness, initiative, disinterested cognitive interest, responsibility for the results of one's actions, conscientiousness, competence are personality traits that characterize the subject of research activities that correspond to the ideals and norms of modern science.

The abstract is an independent educational and research activity of the master. The teacher provides advisory assistance and evaluates the process and results of the activity. He provides an approximate topic for abstracts, clarifies the problem and the topic of research together with the intern, helps to plan and organize research activities, appoints the time and minimum number of consultations.

The teacher accepts the text of the abstract for verification at least ten days before the defense.

Traditionally, a certain structure of the abstract has developed, the main elements of which, in the order of their location, are the following:

1. Title page.
2. Task.
3. Table of contents.
4. List of symbols, symbols and terms (if necessary).
5. Introduction.
6. The main part.
7. Conclusion.
8. Bibliographic list.
9. Applications.

The title page indicates: educational institution, graduating department, author, teacher, research topic, place and year of the abstract.

The title of the abstract should be as short as possible and fully correspond to its content.

The table of contents (content) reflects the names of the structural parts of the abstract and the pages on which they are located. It is advisable to place the table of contents at the beginning of work on one page.

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

Thus, the introduction is a very important part of the abstract. The introduction should begin with a rationale for the relevance of the chosen topic. When applied to the abstract, the concept of "relevance" has one feature. From how the author of the abstract knows how to 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 readiness.

In addition, in the introduction it is necessary to isolate the methodological basis of the abstract, to name the authors whose works formed the theoretical basis of the study. A review of the literature on the topic should show the author's thorough acquaintance with specialized literature, his ability to systematize sources, critically examine them, highlight the essential, determine the main thing in the current state of study of the topic.

The introduction reflects the significance 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 general conclusions about the scientific and practical significance of the topic, the degree of its study and availability of sources, and the formulation of a hypothesis.

In the main part, the essence of the problem is stated, the topic is revealed, the author's position is determined, factual material is given as an argument and for illustrations of the put forward provisions. The author needs to show the ability to consistently present the material while simultaneously analyzing it. Preference is given to the main facts, rather than small details.

The abstract ends with the final part, which is called the "conclusion". Like any conclusion, this part of the abstract plays the role of a conclusion determined by the logic of the study, which is in the form of a synthesis of the scientific information accumulated in the main part. This synthesis is a consistent, logically coherent presentation of the results obtained and their relationship with the general goal and specific tasks set and formulated in the introduction. It is here that the so-called "inferential" knowledge is contained, which is new in relation to the original knowledge. The conclusion may include suggestions of a practical nature, thereby increasing the value of theoretical materials.

So, in the conclusion of the abstract should be: a) the conclusions on the results of the study are presented; b) theoretical and practical significance, novelty of the abstract; c) the possibility of applying the results of the study is indicated.

After the conclusion, it is customary to place a bibliographic list of used literature. This list is one of the essential parts of the abstract and reflects the independent creative work of the author of the abstract.

The list of sources used is placed at the end of the work. It is issued either in alphabetical order (by the author's last name or the title of the book), or in the order in which references appear in the text of the written work. In all cases, the full title of the work, the names of the authors or the editor of the publication, if a team of authors participated in writing the book, data on the number of volumes, the name of the city and publishing house in which the work was published, the year of publication, the number of pages are indicated.

### **Guidelines for preparing presentations**

To prepare a presentation, it is recommended to use: PowerPoint, MS Word, Acrobat Reader, LaTeX beamer package. The simplest presentation program is Microsoft PowerPoint. To prepare the presentation, it is necessary to process the information collected when writing the abstract.

The sequence of preparation of the presentation:

1. Clearly state the purpose of the presentation.
2. Determine what will be the format of the presentation: live performance (then how long will it be) or email (what will be the context of the presentation).
3. Select all the content for 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 specifics 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.

Visualization types include illustrations, images, diagrams, tables. An illustration is a representation of a real-life visual range. Images, unlike illustrations, are metaphors. Their purpose is to evoke emotion and create an attitude towards it, to influence the audience. With the help of well-thought-out and presented images, information can remain in a person's memory for a long time. Diagram - visualization of quantitative and qualitative relationships. They are used to convincingly demonstrate data, for spatial reasoning in addition to logical reasoning. A table is a concrete, visual and accurate display of data. Its main purpose is to structure information, which sometimes makes it easier for the audience to perceive the data.

### *Practical Tips for Preparing a Presentation*

- printed text + slides + handouts are prepared separately;

- slides - a visual presentation of information, which should contain a minimum of text, a maximum of images that carry a semantic load, look clear and simple;
- the 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: topic, surname and initials of the speaker; message plan; brief conclusions from what has been said; list of sources used;
- handouts – should provide the same depth and scope as a live performance: people trust what they can carry with them more than disappearing images, words and slides are forgotten, and handouts remain a constant tangible reminder; it is important to hand out handouts at the end of the presentation; handouts should be different from slides, should be more informative.

### **Abstract Evaluation Criteria**

The stated understanding of the abstract as a holistic author's text determines the criteria for its evaluation: the novelty of the text; the validity of the choice of source; the degree of disclosure of the essence of the issue; compliance with formatting requirements.

**Text novelty:**a) the relevance of the research topic; b) novelty and independence in posing the problem, formulating a new aspect of a well-known problem in establishing new connections (interdisciplinary, intradisciplinary, integration); c) the ability to work with research, critical literature, systematize and structure the material; d) the manifestation of the author's position, the independence of assessments and judgments; e) stylistic unity of the text, unity of genre features.

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

**The validity of the choice of sources:**a) assessment of the literature used: whether the most famous works on the research topic were involved (including journal publications of recent years, the latest statistics, summaries, references, etc.).

**Compliance with formatting requirements:**a) how correctly the references to the literature used, the list of references are drawn up; b) assessment of literacy and culture of presentation (including spelling, punctuation, stylistic culture),

knowledge of terminology; c) compliance with the requirements for the volume of the abstract.

**The reviewer should clearly articulate** remarks and questions, preferably with links to the work (possible to specific pages of the work), to research and factual data that the author did not take into account.

**The reviewer may also indicate:** whether the master has addressed the topic before (abstracts, written works, creative works, olympiad works, etc.) and whether there are any preliminary results; how the graduate did the work (plan, intermediate stages, consultation, revision and revision of the written or lack of a clear plan, rejection of the leader's recommendations).

The master submits an abstract for review no later than a week before the defense. The teacher is the reviewer. Experience shows that it is advisable to familiarize the master with the review a few days before the defense. Opponents are appointed by a teacher from among the masters. For an oral presentation, 10-20 minutes are enough (approximately so much time answers the tickets for the exam).

**Grade 5** it is set if all the requirements for writing and defending the abstract are met: the problem is identified and its relevance is justified, a brief analysis of various points of view on the problem under consideration is made and one's own position is logically stated, conclusions are formulated, the topic is fully disclosed, the volume is maintained, the requirements for external design are met, correct answers were given to additional questions.

**Grade 4**– the basic requirements for the abstract and its defense are met, but there are some shortcomings. In particular, there are inaccuracies in the presentation of the material; there is no logical sequence in judgments; the volume of the abstract is not maintained; there are omissions in the design; incomplete answers were given to additional questions during the defense.

**Grade 3**– there are significant deviations from the requirements for referencing. In particular: the topic is covered only partially; Factual errors were made in the content of the abstract or when answering additional questions; no output during protection.

**Grade 2**- the topic of the abstract is not disclosed, a significant misunderstanding of the problem is revealed.

**Grade 1**- Abstract not submitted.

### **Topics for essays and presentations**

1. OECD Environmental and Health Program. Goals and main tasks.
2. History of the BPH Program.
3. OECD Chemicals Program.



4. OECD Testing Guidelines as a set of methods for the identification of hazardous chemicals.

5. Laboratory practice and compliance monitoring as a supplement to the Chemical Testing Manual.

6. Assessment and regulation of the circulation of chemicals. New chemicals.

7. Program for the Harmonization of the Classification and Labeling of Chemicals, aimed at coordinating interactions on hazardous chemicals.

8. Methods for assessing the hazard of chemicals.

9. Risk management methods for the use of chemicals. Accumulated experience.

10. Method (K)SSA.

11. Method for the analysis of endocrine disorders.

12. Test methods without using animal models.

13. Toxicogenomics.

14. Pesticides.

15. Biocides.

16. Chemical accidents.

17. Emissions and transfer of pollutants.

18. Safety of nanomaterials.

19. Safety in biotechnology.

20. Safety of new food and feed products.

21. Healthy lifestyle: definition, mechanisms of its formation. The role of doctors in the formation of a healthy lifestyle.

22. Hygienic education and education of the population: goals, principles, methods, forms and means.

23. Development of regional medical and preventive programs.

24. The role and place of professional associations in domestic and foreign healthcare.

25. Socio-hygienic monitoring.

### **Criteria for evaluating the performance of independent work**

*Evaluation of independent work* is carried out according to the following criteria:

- the completeness and quality of the tasks performed;
- possession of methods and techniques of computer modeling in the issues under study, the use of software tools;
- the quality of the report design, the use of rules and standards for the design of text and electronic documents;

- use of data from domestic and foreign literature, Internet sources, regulatory information and best practices;
- absence of factual errors related to understanding the problem.
- When evaluating students' knowledge, not only the amount of knowledge is taken into account, but, first of all, the quality of assimilation of the material, understanding the logic of the academic discipline, the ability to freely, competently, logically present what has been learned is evaluated, the ability to reasonably defend one's own point of view.
  - “Excellent” marks the answer to independent tasks, in which the material is systematically, logically and consistently presented.
  - The “good” rating implies knowledge of the material and the ability to draw independent conclusions, comment on the material presented; answer with minor flaws.
  - Assimilation of the material is assessed as "satisfactory" when the student has not studied some sections deeply enough, allows fuzzy formulations, and gives incomplete answers.
  - "Unsatisfactory" is put in the case when the student does not know a significant part of the educational material, makes significant mistakes; knowledge is unsystematic.

#### • **Abstract Evaluation Criteria**

- - 100-86 points are given to the student if the student expressed his opinion on the formulated problem, argued it, accurately defining its content and components. The data of domestic and foreign literature, statistical information, information of a regulatory nature are given. The student knows and owns the skill of independent research work on the research topic; methods and techniques for analyzing the theoretical and / or practical aspects of the area under study.
- - 85-76 - points - the work is characterized by semantic integrity, coherence and consistency of presentation; no more than 1 mistake was made when explaining the meaning or content of the problem. For argumentation, data of domestic and foreign authors are given. Demonstrated research skills and abilities. There are no actual errors related to understanding the problem.
- - 75-61 points - the student conducts a fairly independent analysis of the main stages and semantic components of the problem; understands the basic foundations and theoretical justification of the chosen topic. The main sources on the topic under consideration are attracted. No more than 2 errors were made in the sense or content of the problem.
- - 60-50 points - if the work is a retold or completely rewritten source text without any comments or analysis. The structure and theoretical component of

the topic is not disclosed. Three or more than three errors were made in the semantic content of the problem being disclosed.

## **V. EDUCATIONAL AND METHODOLOGICAL PROVISION OF STUDENTS' INDEPENDENT WORK**

Independent work is defined as an individual or collective learning activity carried out without the direct guidance of a teacher, but according to his instructions and under his control. Independent work is a cognitive learning activity, when the sequence of a student's thinking, his mental and practical operations and actions depends and is determined by the student himself.

Independent work of students contributes to the development of independence, responsibility and organization, a creative approach to solving problems at the educational and professional levels, which ultimately leads to the development of the skill of independent planning and implementation of activities.

The purpose of independent work of students is to master the necessary competencies in their field of study, experience in creative and research activities.

Forms of independent work of students:

- work with basic and additional literature, Internet resources;
- self-acquaintance with the lecture material presented on electronic media in the library of an educational institution;
- preparation of abstract reviews of sources of periodicals, reference notes, predetermined by the teacher;
- search for information on the topic with its subsequent presentation to the audience in the form of a report, presentations;
- preparation for the implementation of classroom control work;
- performance of home control works;
- performance of test tasks, problem solving;
- drawing up crossword puzzles, schemes;
- preparation of reports for presentation at a seminar, conference;
- filling out a workbook;
- essay writing, term paper;
- preparation for business and role-playing games;
- compiling a resume;
- preparation for tests and exams;
- other kinds activities, organized And carried out educational institution and student self-government bodies.

## VI. CONTROL OF ACHIEVEMENTS OF THE GOALS OF THE COURSE

No. p / p	Controlled modules / sections / topics of the discipline	Codes and stages of formation of competencies		Appraisal tools - name	
				current control	intermediate certification
1	Section 1 Methods for studying sources of pollution of the external environment and public health	PC-3.1; PC-3.2; PC-3.3; PC-5.1; PC-5.2; PC-5.3	Knows	Interview UO-1, abstract PR-4,	Exam Questions 1-25
			Can	Tests PR-1, essay PR-3, situational case-tasks PR-11, presentation	
			owns	Work in small groups, reports of UR-3	
2	Section 2 Protective systems of the body and protection of a person from the harmful effects of the external environment	PC-3.1; PC-3.2; PC-3.3; PC-5.1; PC-5.2; PC-5.3	Knows	Interview UO-1, abstract PR-4,	Exam Questions 26-51
			Can	Tests PR-1, essay PR-3, situational case-tasks PR-11, presentation	
			owns	Work in small groups, reports of UR-3	

## IV. LIST OF EDUCATIONAL LITERATURE AND INFORMATION AND METHODOLOGICAL SUPPORT OF THE DISCIPLINE

### Main literature

1. social ecology: textbook / B.I. Kochurov, E.A. Minakov. - Moscow: KnoRus, 2018. - 287 p. - For bachelors and masters. - ISBN 978-5-406-05916-6.  
<https://www.book.ru/book/927968>

2. Methods and means of complex statistical data analysis: studies. allowance / A.P. Kulaichev. - 5th ed., revised. and additional - M. : INFRA-M, 2018. - 484 p. - Access mode:<http://znanium.com/catalog/product/975598>

3. Markov Yu.G. Social ecology. Interaction of society and nature [Electronic resource]: textbook/ Markov Yu.G.— Electron. text data.— Novosibirsk: Siberian University Publishing House, 2017.— 544 pp.— Access mode: <http://www.iprbookshop.ru/65291.html>.

4. Public health and health care [Electronic resource]: textbook / Medic V. A., Yuryev V. K. - 2nd ed., corrected. and additional - M. : GEOTAR-Media, 2016. - 608c.

<http://www.studentlibrary.ru/book/ISBN9785970437100.html>

5. Artyunina G.P. Fundamentals of social medicine [Electronic resource]: textbook for universities / Artyunina G.P. — Electron. text data. - M.: Academic Project, 2016. - 570 p.

<http://www.iprbookshop.ru/60359.html>. - ELS "IPRbooks"

6. social ecology: textbook / G.B. Khasanova. - Moscow: KnoRus, 2016. - 216 p. - ISBN 978-5-406-04556-5.

<https://www.book.ru/book/916984>

7. Novgorodtseva A.N. Social ecology [Electronic resource]: teaching aid / A.N. Novgorodtsev. — Electron. text data. - Yekaterinburg: Ural Federal University, EBS DIA, 2015. - 76 p.

Access mode: <http://www.iprbookshop>

### **additional literature**

1. Artyunina G.P. Fundamentals of social medicine [Electronic resource]: textbook for universities / Artyunina G.P. — Electron. text data.— M.: Academic Project, 2016.— 570 p.— Access mode: <http://www.iprbookshop.ru/60359.html>.— EBS “IPRbooks”

2. Bogomolova N.D. System analysis in health care [Electronic resource]: educational and methodological recommendations / Bogomolova N.D., Tkachev A.D., Batievskaya V.B. — Electron. text data.— Kemerovo: Kemerovo State Medical Academy, 2016.— 52 pp.— Access mode: <http://www.iprbookshop.ru/6222.html>.

3. Markov Yu.G. Social ecology. Interaction of society and nature [Electronic resource]: textbook/ Markov Yu.G.— Electron. text data.— Novosibirsk: Siberian University Publishing House, 2017.— 544 pp.— Access mode: <http://www.iprbookshop.ru/65291.html>.

4. Medical and sociological monitoring: [manual] / A. V. Reshetnikov. Moscow: GEOTAR-Media, 2013.-796 p.

<http://lib.dvfu.ru:8080/lib/item?id=chamo:730046&theme=FEFU>

5. Public health and healthcare: a textbook for universities / V. A. Medic. Moscow: GEOTAR-Media, 2018. - 649 p.

<http://lib.dvfu.ru:8080/lib/item?id=chamo:842379&theme=FEFU>

6. Sociology: Textbook / Dobrenkov V.I., Kravchenko A.I. - M.: NITs INFRA-M, 2017. - 624 p. <http://znanium.com/catalog/product/553436>

7. Human ecology [Electronic resource]: a textbook for universities / Ed. Grigorieva A.I. - M.: GEOTAR-Media, 2016. -

<http://www.studmedlib.ru/book/ISBN9785970437476.html>

8. Weiner E.N., Volynskaya E.V. Valeology: textbook. workshop /. - 2nd ed., erased. - M.: Flinta, 2012. - 312 p. Access mode:

- <http://www.studentlibrary.ru/book/ISBN9785893493870.html>
9. Medic V.A., Yuriev V.K. Public health and healthcare. Textbook. - M. : GEOTAR-Media, 2014. - 287 p.  
<http://lib.dvfu.ru:8080/lib/item?id=chamo:730369&theme=FEFU>
10. Petrov V.I., Nedogoda S.V. Evidence-based medicine GEOTAR-Media. - 2012. - 144 p.  
<http://lib.dvfu.ru:8080/lib/item?id=chamo:730071&theme=FEFU>
11. Shchepin O.P., Medic V.A. Public health and health care: a textbook. - M. : GEOTAR - Media, 2012. - 608 p.  
<http://lib.dvfu.ru:8080/lib/item?id=chamo:730366&theme=FEFU>
12. Khismatullina Z.N. Fundamentals of social medicine [Electronic resource]: textbook / Khismatullina ZN - Electron. text data. Kazan: Kazan National Research Technological University, 2011. 152 p. Access mode: <http://www.iprbookshop.ru/62222.html>.

**List of resources of the information and telecommunications network  
"Internet"**

**List of resources of the information and telecommunications network  
"Internet" required to master the discipline**

1. Student library <http://www.studmedlib.ru>
2. INEC website. Information Ecological Agency. Environmental and social projects, ECO-bulletin, seminars, environmental management and audit, development of environmental standards, environmental impact assessment: <http://ineca.ru/>
3. Primorsky region of Russia:  
<http://www.fegi.ru/PRIMORYE/ANIMALS/bpi.htm>
4. Scientific electronic library: <http://www.elibrary.ru>
5. Central Scientific Medical Library: <http://www.scsml.rssi.ru>
6. Medical Internet Resources: <http://www.it2med.ru/mir.html>
7. Publishing house "Medicine": <http://www.medlit.ru>

**List of information technologies and software**

- Microsoft Office Professional Plus 2010;
- an 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 - software for optical character recognition;
- Adobe Acrobat XI Pro - a software package for creating and viewing electronic publications in PDF format;

–ESET Endpoint Security - comprehensive protection of workstations based on Windows OS. Virtualization support + new technologies;

–WinDjView 2.0.2 is a program for recognizing and viewing files with the same name format DJV and DjVu.

## **VIII. METHODOLOGICAL INSTRUCTIONS FOR MASTERING THE DISCIPLINE**

Practical classes of the course are held in all sections of the curriculum. Practical work is aimed at developing masters' skills of independent research work. During practical classes, the master performs a set of tasks that allows you to consolidate the lecture material on the topic under study.

Active consolidation of theoretical knowledge is facilitated by the discussion of problematic aspects of the discipline in the form of a seminar and classes using active learning methods. At the same time, the development of skills of independent research activity in the process of working with scientific literature, periodicals, the formation of the ability to reasonably defend one's point of view, listen to others, answer questions, and lead a discussion take place.

*Lecture classes* are focused on highlighting the main topics in each section of the course and are designed to orient students in the proposed material, lay the scientific and methodological foundations for further independent work of students.

Particularly significant for the professional training of students is independent work on the course. In the course of this work, students select the necessary material on the issue under study and analyze it. Independent work with literature includes such techniques as drawing up a plan, theses, abstracts, annotating sources, writing tests.

Students need to be introduced to the main sources, without which it is impossible to fully understand the issues of the course. Therefore, these sources are recommended for students to study at home and are included in the program.

Mastering the course should contribute to the development of skills for reasonable and independent assessments of facts and scientific concepts. Therefore, in all forms of knowledge control, especially when passing a test, attention should be paid to understanding the main problem field, to the ability to critically use its results and conclusions.

In the process of teaching the discipline, the following methods of active / interactive learning are used:

Lectures:

### **1. Problem lecture.**

The lecture begins with the teacher posing problems that are solved in the course of presenting the material. The answer to the problem requires thinking of the entire audience. During the lecture, students' thinking occurs with the help of the teacher creating a problem situation before they receive all the necessary information that constitutes new knowledge for them. Thus, students independently try to find a solution to the problem situation.

Educational problems are available according to their difficulty for students, they take into account the cognitive capabilities of students, proceed from the subject being studied and are significant for the assimilation of new material and personal development - general and professional.

The problem lecture provides creative assimilation by future specialists of the principles and patterns of the studied science, activates the educational and cognitive activity of students, their independent classroom and extracurricular work, the assimilation of knowledge and their application in practical classes.

**Practical lessons** focused on the most fundamental and problematic issues and are designed to stimulate the development of their own position on these topics.

In working with students, a variety of means, forms and methods of teaching (information-developing, problem-search) are used: the method of scientific discussion, a conference or a round table, an analysis of specific educational situations (case study).

#### **Conference or round table**

When using this method, you can invite various specialists involved in the study of the problem under consideration or working on a topic studied by students. These can be scientists, economists, artists, representatives of public organizations, government agencies, etc.

Before such a meeting, the teacher invites students to put forward a problem of interest to them on this topic and formulate questions for their discussion. If students find it difficult, the teacher can suggest a number of problems and, together with the students, choose a more interesting one for them. Selected questions are transferred to the invited expert of the round table to prepare for the presentation and answers. At the same time, several specialists involved in the study of this problem can be invited to the "round table". In order for the round table meeting to be active and interested, it is necessary to encourage listeners to exchange views and maintain an atmosphere of free discussion.

When applying all these forms of classes, students get a real practice of formulating their point of view, comprehending the system of argumentation, that is, turning information into knowledge, and knowledge into beliefs and views.



The collective form of interaction and communication teaches students to formulate thoughts in a professional language, to speak orally, to listen, hear and understand others, to argue correctly and reasonably. Joint work requires not only individual responsibility and independence, but also self-organization of the work of the team, exactingness, mutual responsibility and discipline. At such seminars, the subject and social qualities of a professional are formed, the goals of training and educating the personality of a future specialist are achieved.

The features of collective mental activity are that there is a rigid dependence of the activity of a particular student on a fellow student; it helps to solve the psychological problems of the team; there is a “transfer” of action from one participant to another; self-management skills develop.

There are various forms of organizing and conducting this type of training, such as a press conference.

At the previous lesson, the teacher gives the task to students to individually answer the questions of the practical lesson and collectively discuss options for solving the same situation, which significantly deepens the experience of the trainees. Faced with a specific situation, the student must determine whether there is a problem in it, what it consists of, determine their attitude to the situation. At the same time, each student must, by getting used to the role of specific historical figures, analyze the causes, course and results of the events. The practical lesson begins with an introductory speech by the teacher, in which the problems for discussion are voiced. As the discussion proceeds, each of the students has the opportunity to get acquainted with the solutions, listen and weigh their many assessments, additions, changes, enter into a dialogue and discussion.

As the questions of the practical lesson are discussed, the analytical abilities of the trainees develop, contribute to the correct use of the information at their disposal, develop independence and initiative in decisions.

At the final stage of the lesson, the teacher, correcting the conclusions on the performances of students, draws general conclusions for each practical task and the overall result for the entire lesson.

### **Method of scientific discussion**

The academic group is divided into two subgroups - generators and critics of ideas. Three more people stand out - expert analysts.

The practical lesson is implemented in four stages:

The first is preparatory (carried out 1-2 weeks before the practical session). The teacher instructs about the purpose, content, nature, rules of participation in the game. Student preparation includes:

- determination of the purpose of the lesson, specification of the educational task;

- planning the general course of the lesson, determining the time of each stage of the lesson;

- development of criteria for evaluating the proposals and ideas received, which will make it possible to purposefully and meaningfully analyze and summarize the results of the lesson.

Mutual criticisms and evaluations are strictly prohibited; they hinder the emergence of new ideas. You should refrain from actions, gestures that may be misinterpreted by other participants in the session. No matter how fantastic or incredible the idea put forward by any of the participants in the session, it should be met with approval. The more proposals put forward, the greater the likelihood of a new and valuable idea.

The second - the lesson begins with the fact that the generators of ideas quickly and clearly characterize the ruler, the situation in the country and express all proposals for solving the named problem;

Third - critics of ideas "attack" - select the most valuable, progressive of them, analyze, evaluate, criticize and include in the list of relevant assumptions that provide a solution to the problem;

Fourth - experts analyze and evaluate the activities of both subgroups, the significance of the ideas put forward.

The goal of the teacher is to organize collective mental activity to find non-traditional ways to solve problems, when discussing controversial issues, hypotheses, problematic or conflict situations.

When writing essays, it is recommended to independently find literature for it. The abstract reveals the content of the problem under study. Working on an essay helps to deepen the understanding of individual issues of the course, form and defend one's point of view, acquire and improve the skills of independent creative work, and conduct active cognitive work.

An interview and a survey are conducted to conduct ongoing monitoring and intermediate certification.

## **IX. LOGISTICS AND TECHNICAL SUPPORT OF THE DISCIPLINE**

The educational process in the discipline is carried out in the lecture, computer classes of the building of the School of Biomedicine of the FEFU campus, equipped with computers and multimedia systems, with a connection to the FEFU corporate network and the Internet, the simulation Center of the FEFU School of Biomedicine.

The material and technical support for the implementation of the discipline includes classrooms for lectures and practical classes, equipped with multimedia support and corresponding to sanitary and contrary rules and regulations.

In order to provide special conditions for the education of people with disabilities and people with disabilities in FEFU, all buildings are equipped with ramps, elevators, lifts, specialized places equipped with toilets, information and navigation support signs.

Name of equipped premises and premises for independent work	List of main equipment
690922, Primorsky Territory, Vladivostok, Russian Island, Saperny Peninsula, Ayaks village, 10, School of Biomedicine, room M 422, area 158.6 m <sup>2</sup>	Multimedia Audience: Motorized Screen 236*147cm Trim Screen Line; Projector DLP, 3000 ANSI Lm, WXGA 1280x800, 2000:1 EW330U Mitsubishi; document camera CP355AF Avervision, video camera MP-HD718 Multipix; Subsystem of specialized equipment fastenings CORSA-2007 Tuarex; Video switching subsystem: Audio switching and sound amplification subsystem: power amplifier, wireless LAN based on 802.11a/b/g/n 2x2 MIMO(2SS) access points.
690922, Primorsky Territory, Vladivostok, Russian Island, Saperny Peninsula, Ayaks village, 10, School of Biomedicine, room M 419, area 74.9 m <sup>2</sup>	Multimedia Audience: Motorized Screen 236*147cm Trim Screen Line; Projector DLP, 3000 ANSI Lm, WXGA 1280x800, 2000:1 EW330U Mitsubishi; document camera CP355AF Avervision, video camera MP-HD718 Multipix; Subsystem of specialized equipment fastenings CORSA-2007 Tuarex; Video switching subsystem: Audio switching and sound amplification subsystem: power amplifier, wireless LAN based on 802.11a/b/g/n 2x2 MIMO(2SS) access points.
690922, Primorsky Territory, Vladivostok, Russian Island, Saperny Peninsula, Ayaks settlement, 10, room M612, area 47.2 m <sup>2</sup>	Computer class for 22 workplaces: HP ProOpe 400 All-in-One 19.5 (1600x900), Core i3-4150T, 4GB DDR3-1600 (1x4GB), 1TB HDD 7200 SATA, DVD+/-RW, GigEth, Wi-Fi, W, usb kbd/ mse, Win7Pro(64-bit)+Win8.1Pro(64-bit), 1-1-1 Wty (25 pcs.)
Reading rooms of the FEFU Scientific Library with open access to the fund (building A - level 10)	HP ProOpe 400 All-in-One 19.5 (1600x900), Core i3-4150T, 4GB DDR3-1600 (1x4GB), 1TB HDD 7200 SATA, DVD+/-RW, GigEth, Wi-Fi, BT, usb kbd/ mse, Win7Pro (64-bit)+Win8.1Pro(64-bit), 1-1-1 Wty Internet access speed 500 Mbps. Workplaces for people with disabilities are equipped with Braille displays and printers; equipped with: portable devices for reading flat-print texts, scanning and reading machines, a video enlarger with the ability to regulate color spectra; magnifying electronic loupes and ultrasonic markers

## X. VALUATION FUND

### FOS passport

Professional competencies of graduates and indicators of their achievement:

Task type	Code and name of professional competence (result of development)	Code and name of the indicator of achievement of competence
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Task type	Code and name of professional competence (result of development)	Code and name of the indicator of achievement of competence
organizational and managerial	PC-3 The ability to organize, plan and control the activities of a structural unit of a medical organization	PC-3.1 Knows the standards of medical care PC-3.2 Knows how to assess the resources of a medical organization and implement a quality management system PC-3.3 Possesses the necessary skills for compiling reporting documentation, evaluating the activities of a healthcare institution
organizational and managerial	PC-5 The ability to evaluate the effectiveness of the activities of a medical organization, develop and select optimal management decisions, develop a business plan for the development of a medical organization, use a process approach in managing a medical organization, use technological maps of the processes of a medical organization	PC-5.1 Knows the methods of planning a medical organization PC-5.2 Able to draw up a plan for a medical organization, develop business planning and investment projects PC-5.3 Proficient in planning, developing business planning and investment projects

Code and name of the indicator of achievement of competence	Name of the assessment indicator (the result of training in the discipline)
PC-3.1 Knows the standards of medical care	Knows the standards of medical care Able to provide first aid Proficient in first aid
PC-3.2 Knows how to assess the resources of a medical organization and implement a quality management system	Knows the quality management system of a medical organization Knows how to evaluate the resources of a medical organization and implement a quality management system Possesses the skill of assessing the resources of a medical organization and implementing a quality management system
PC-3.3 Possesses the necessary skills for compiling reporting documentation, evaluating the activities of a healthcare institution	Knows the reporting documentation of the medical organization Able to prepare reporting documentation of a medical organization Possesses the necessary skills for compiling reporting documentation, evaluating the activities of a healthcare institution
PC-5.1 Knows the methods of planning a medical organization	Knows the methods of planning a medical organization Able to plan the work of a medical organization
PC-5.2 Able to draw up a plan for a	Knows the rules for drawing up a plan for a medical

medical organization, develop business planning and investment projects	<p>organization, develop a business plan, an investment project</p> <p>Able to draw up a plan for a medical organization, develop business planning and investment projects</p> <p>Has the skill of drawing up a plan for a medical organization, developing business and investment projects</p>
PC-5.3 Proficient in planning, developing business planning and investment projects	<p>Knows the principles of goal-setting, types and methods of organizational planning and fundamental concepts of financial management, as well as the method of a process approach to managing a medical organization</p> <p>Able to develop corporate, competitive and functional strategies for the development of the organization, develop investment projects and conduct their verification</p> <p>He owns the methods of formulating and implementing strategies at the business unit level, developing and implementing marketing programs, as well as methods of investment analysis and analysis of financial markets, a process approach in managing a medical organization and the ability to use flow charts of the processes of a medical organization.</p>

### Monitoring the achievement of course goals

No. p / p	Controlled modules / sections / topics of the discipline	Codes and stages of formation of competencies		Appraisal tools - name	
				current control	intermediate certification
1	Section 1 Methods for studying sources of pollution of the external environment and public health	PC-3.1; PC-3.2; PC-3.3; PC-5.1; PC-5.2; PC-5.3	Knows	Interview UO-1, abstract PR-4,	Exam Questions 1-25
			Can	Tests PR-1, essay PR-3, situational case-tasks PR-11, presentation	
			owns	Work in small groups, reports of UR-3	
2	Section 2 Protective systems of the body and protection of a person from the harmful effects of the external environment	PC-3.1; PC-3.2; PC-3.3; PC-5.1; PC-5.2; PC-5.3	Knows	Interview UO-1, abstract PR-4,	Exam Questions 26-51
			Can	Tests PR-1, essay PR-3, situational case-tasks PR-11, presentation	
			owns	Work in small groups, reports of UR-3	

### Competence level assessment scale

<b>Code and wording of competence</b>	<b>Stages of competence formation</b>		<b>criteria</b>	<b>indicators</b>	<b>points</b>
<b>PC-3</b> The ability to organize, plan and control the activities of a structural unit of a medical organization	knows (threshold level)	basics of planning, organization and implementation of the activities of a structural unit of a medical organization	basic knowledge of planning and control of the activities of the structural unit of the medical organization	ability to prepare the necessary documentation for planning and control of the activities of the structural unit of the medical organization	61-70
	can (advanced)	analyze and evaluate performance indicators of a structural unit of a medical organization	the ability to analyze and evaluate the performance of a structural unit of a medical organization	ability to justify evaluation criteria organization, planning and control of the activities of a structural unit of a medical organization	71-84
	owns (high)	skills preparation of substantiation of volumes medical care in accordance with the necessary resources in the structural unit of the medical organization	methods for substantiating the volume of medical care in a structural unit of a medical organization	ability to prepare the necessary calculations for organization, planning and control of the activities of a structural unit of a medical organization	85-100
<b>PC-5</b> The ability to assess the effectiveness of the activities of a medical organization, develop and select optimal management decisions, develop a business plan for the development of a medical organization, use a process approach in managing a medical organization, use	knows (threshold level)	principles of goal setting, types and methods of organizational planning and fundamental concepts of financial management	knowledge of the basic concepts of research processes, incl. business processes in medicine	the ability to explain the main stages of the study of the business plan of a medical organization, the process approach in the management of a medical organization	61-70
	can (advanced)	develop corporate, competitive and functional strategies for the development of the organization, develop investment projects and conduct their verification	the ability to analyze and compare the stages of the process of strategic development of a medical organization, business planning	the ability to develop investment projects and conduct their verification based on the use of a process approach in the	71-84

technological maps of the processes of a medical organization			and the use of technological maps of the processes of medical activity	management of a medical organization and the use of technological maps of the processes of medical activity	
	owns (high)	methods for formulating and implementing strategies at the business unit level, developing and implementing marketing programs, as well as methods for investment analysis and analysis of financial markets.	methods of collecting, processing, analyzing information and presenting them to implement the business strategies of a medical organization using flow charts of medical activities	the ability to formulate the main stages and explain the tasks for the implementation of marketing programs and the analysis of financial markets using a process approach in the management of a medical organization and the use of technological process maps of medical activities	85-100

### **Methodological recommendations that determine the procedures for evaluating the results of development disciplines**

*Current assessment of students.* The current attestation of students in the discipline "The region's population and health priorities" is carried out in accordance with the local regulations of FEFU and is mandatory.

The current attestation in the discipline "The region's population and health priorities" is carried out in the form of control measures (a written survey, defense of practical / laboratory work) to assess the actual results of master's education by the leading teacher.

The objects of assessment are:

- academic discipline (activity in the classroom, the timeliness of the implementation of various types of tasks, attendance at all types of classes in the discipline being certified);
- the degree of assimilation of theoretical knowledge;

- the level of mastery of practical skills and abilities in all types of educational work;

- results of independent work.

For each object, a description of the assessment procedures is given in relation to the assessment tools used.

*Intermediate certification of students.* Intermediate certification of students in the discipline "The region's population and health priorities" is carried out in accordance with the local regulations of FEFU and is mandatory.

Depending on the type of intermediate control in the discipline and the form of its organization, various criteria for assessing knowledge, skills and abilities can be used.

Intermediate certification in the discipline "The region's population and health priorities" is carried out in the form of a test in the form of a written response.

**Test and examination materials.** When assessing students' knowledge, intermediate control takes into account the amount of knowledge, the quality of their assimilation, understanding the logic of the academic discipline, the place of each topic in the course. The ability to freely, competently, logically coherently present what has been studied, the ability to reasonably defend one's own point of view are assessed.

### **Evaluation tools for intermediate certification**

#### **Questions for the exam**

1. OECD Environmental and Health Program: subject. Place in the system of biology and natural sciences in general.

2. Significance of the OECD Environmental and Health Program for modern society. Research methods: field observations, experiments, theoretical modeling.

3. History of the OECD Environmental and Health Program.

4. Environmental factors. General patterns of their action on organisms. Metabolism in the "environment-organism" system. Classification of factors. The division of factors into resources and conditions.

5. Main regularities of action of abiotic factors. Law of the limiting factor. Joint action of factors.

6. Light as an environmental factor. The importance of light in the life of plants and animals.

7. Temperature as an environmental factor. ectothermic organisms. Effective temperatures of development of plants and poikilothermic animals.

8. Water as an environmental factor. The concept of the humidity of the environment. Water in terrestrial habitats.



9. Living organisms as a habitat. Parasitism. Variety of forms of parasitism. Basic ecological adaptations of internal parasites. Ecological specificity of external parasitism.

10. The doctrine of the biosphere. Works by V.I. Vernadsky. Biosphere as a global ecosystem.

11. Characteristics of populations. Definition of a population. Population as a biological system. Population structure of the species. population boundaries.

12. Static and dynamic indicators.

13. Demographic structure of populations. Sex composition, its genetic and age dynamics

14. Population homeostasis. Self-thinning in plants. Cannibalism in animals. Suppression of metabolic products. Territoriality as a mechanism for removing overpopulation in animals. The role of settling migrations in the regulation of population numbers, physiological changes in individuals due to population density.

15. Nuclear energy, prospects for its development, problems of nature protection.

16. Anthropogenic change in natural complexes during the creation of hydroelectric power plants.

17. Non-traditional ways of generating energy.

18. Classification of the main pollutants - physical, chemical, biological.

19. Transport pollution of the atmosphere. The phenomenon of photochemical smog.

20. Consequences of environmental pollution with heavy metals.

21. Ways of movement and accumulation of pollutants in the biosphere.

22. Rationing of pollution (MPC, MPE, MPD).

23. Ways and methods of purification of industrial effluents and emissions - physical, chemical, biological.

16. Main groups of OECD programs

17. Methods of Risk Management within the framework of OECD programs.

18. Basic methods for determining the safety of chemicals

19. Economic mechanisms of rational nature management.

20. International cooperation in the field of environmental protection.

### **Exam Grading Criteria**

#### **in the discipline "Health of the region's population and health priorities"**

<b>Exam grade</b>	<b>Requirements for the formed competencies</b>
"Great"	An "excellent" mark is given to a student if he has deeply and firmly mastered the program material, sets it out exhaustively, consistently, clearly and logically, is able to closely link theory

	with practice, freely copes with tasks, questions and other types of application of knowledge, and does not find it difficult to respond when modifying tasks, uses monographic literature in the response, correctly substantiates the decision made, possesses versatile skills and techniques for performing practical tasks;
"Fine"	A "good" grade is given to a student if he knows the material well, presents it competently and to the point, avoiding significant inaccuracies in answering the question, correctly applies theoretical provisions in solving practical issues and tasks, possesses the necessary skills and techniques for their implementation;
"satisfactorily"	The grade "satisfactory" is given to the student if he has knowledge only of the basic material, but has not mastered its details, allows inaccuracies, insufficiently correct wording, violations of the logical sequence in the presentation of the program material, has difficulty in performing practical work;
"unsatisfactory"	The "unsatisfactory" mark is given to a student who does not know a significant part of the program material, makes significant mistakes, performs practical work uncertainly, with great difficulty.

### Evaluation tools for current certification

Control tests are intended for masters studying the course "Health of the region's population and health priorities".

When working with tests, it is proposed to choose one answer option from three to four offered. At the same time, the tests are not the same in their complexity. Among the proposed there are tests that contain several options for correct answers. All correct answers must be provided.

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

The results of the test tasks are evaluated by the teacher on a five-point scale for attestation or according to the "pass" - "fail" system. The grade "excellent" is given with the correct answer to more than 90% of the tests proposed by the teacher. Rating "good" - with the correct answer to more than 70% of the tests. Grade "satisfactory" - with the correct answer to 50% of the proposed tests.

### Sample test tasks

Choose one or more correct answers

**1. Official founder of ecology:**

- 1) Humboldt
- 2) Haeckel \*
- 3) Moebius
- 4) Darwin
- 5) Lovetsky

**2. The subject of the study of ecology is:**

- 1) person
- 2) environment
- 3) living organisms
- 4) the relationship of living organisms and the environment
- 5) the relationship between man and the environment \*

**3. Ecology was formed as an independent scientific discipline in**

- 1) XVIII century
- 2) XX century
- 3) XXI century
- 4) XIX century \*
- 5) middle Ages

**4. Contribution to the formation and development of ecology was made**

- 1) Sukachev
- 2) Vernadsky\*
- 3) Zakharyin
- 4) Pirogov
- 5) Liebig\*

**5. The main directions of ecology:**

- 1) decrease in the level of morbidity of mankind
- 2) monitoring the state of nature\*
- 3) development of forecasts of changes in the biosphere\*
- 4) improvement of medical and demographic indicators
- 5) the formation of an ideology that helps solve environmental problems \*

**6. Biosphere is:**

- 1) Homo Sapiens population
- 2) the totality of all populations
- 3) noosphere
- 4) living organisms in interaction with the environment\*
- 5) animals, plants and microorganisms\*

**7. The largest ecosystem is:**

- 1) city
- 2) country

- 3) forest
- 4) river
- 5) biosphere\*

#### **8 The doctrine of the noosphere created**

- 1) Sukachev
  - 2) Tensley
  - 3) Shelford
  - 4) Dokuchaev
  - 5) Vernadsky\*
9. The ecosystem is made up of
- 1) abiotic and biotic parts\*
  - 2) producers, consumers and decomposers
  - 3) biogenic, bioinert and inert substances
  - 4) plants, animals and microorganisms
  - 5) people and environment
10. Laws of rational nature management proposed
- 1) Darwin\*
  - 2) Linnaeus\*
  - 3) Commoner\*
  - 4) Malthus\*
  - 5) Liebig

#### **11. Global environmental issues**

- 1) depletion of natural resources\*
- 2) extermination of certain species of animals and plants
- 3) demographic crisis
- 4) environmental pollution with waste\*
- 5) terrorism

#### **12. The totality of living organisms of the biosphere -**

- 1) biotope
- 2) biota\*
- 3) community
- 4) population
- 5) biogeocenosis

#### **13. The term "Biogeocenosis" was first proposed**

- 1) Vernadsky
- 2) Mobius\*
- 3) Sukachev
- 4) Liebig
- 5) Tensley

**14. Producers in ecosystems are**

- 1) plants\*
- 2) herbivores
- 3) predatory animals
- 4) microorganisms\*
- 5) worms

**15. Decomposers in ecosystems are**

- 1) bacteria\*
- 2) animals
- 3) plants
- 4) mushrooms\*
- 5) protozoa

**16. Living organisms that recycle dead creatures**

- 1) consumers of the first order
- 2) decomposers\*
- 3) producers
- 4) second order consumers\*
- 5) population

**17. Biotic environmental factors are**

- 1) orographic\*
- 2) edaphogenic\*
- 3) zoogenic\*
- 4) anthropogenic
- 5) phytogenic\*

**18. 3 characteristics of ecological balance:**

- 1) constancy of species composition \*
- 2) constancy of environmental conditions \*
- 3) constancy of nutrient cycles
- 4) full use of energy supplied to the ecosystem
- 5) no waste pollution\*

**19. Population size depends on 2 factors**

- 1) the value of this species for the biosphere \*
- 2) species stability\*
- 3) reproduction rate\*
- 4) biotic potential
- 5) environment resistance

**20. The number of links in the trophic chain is limited due to**

- 1) lack of solar energy
- 2) Dissipation of energy in the form of heat

- 3) lack of food \*
- 4) human intervention\*
- 5) predators and parasites

**21. The main type of relationship between organisms of different trophic levels is:**

- 1) competition
- 2) predation
- 3) symbiosis\*
- 4) mutual assistance
- 5) do not exist

**22. The essence of the biological cycle is:**

- 1) predation
- 2) use of solar energy\*
- 3) burning coal, oil and gas
- 4) photosynthesis\*
- 5) human activity

**23. Principles of functioning of natural ecosystems:**

- 1) existence due to solar energy\*
- 2) existence due to the energy of the burned fuel
- 3) the presence of a cycle of substances \*
- 4) decrease in biomass during the transition to a new trophic level
- 5) increase in biomass during the transition to a new trophic level

**24. 3 main directions for solving environmental problems:**

- 1) improving the quality of medical care for the population
- 2) development of treatment facilities\*
- 3) adoption of laws on nature protection\*
- 4) regulation of the level of anthropogenic load\*
- 5) non-interference of man in the environment

**25. Types of physical pollution of the environment:**

- 1) radioactive\*
- 2) chemical
- 3) light\*
- 4) noise \*
- 5) electromagnetic\*

**26. The wording of Vernadsky's Laws:**

- 1) the law of the constancy of the living matter of the biosphere \*
- 2) the law of conservation of energy
- 3) law of biogenic migration of atoms
- 4) the law of irremovable waste

5) the law of maximum biogenic energy

**27. Directions of modern development of ecology**

- 1) scientific
- 2) integrating
- 3) environmental\*
- 4) worldview
- 5) independent

**28. Knowledge of ecology is necessary for:**

- 1) to understand the general environmental situation
- 2) for the implementation of environmental activities\*
- 3) to work at a pharmaceutical company
- 4) for analytical control of pharmaceutical production waste

**29. Which of the definitions of the concept of "health" is correct?**

- a) the absence of pathology detected by modern research methods.
- b) a state of complete physical, mental and social well-being, and not just the absence of pathology.
- c) the state of the body in which its physiological mechanisms provide it with adaptation to environmental conditions.

**30. What are the factors that affect nature as a result of human activity called?**

- a) abiotic.
- b) isothermal.
- c) biotic.
- d) anthropogenic

**31. What is the basis of primary prevention?**

- a) examination of healthy people exposed to adverse environmental factors.
- b) complete elimination of the harmful factor or reduction of its impact to a safe level.
- c) hygienic regulation of environmental factors.
- d) a set of measures to prevent complications of diseases, rehabilitation and treatment.
- e) the use of antidotes by residents of ecologically unfavorable regions.

**32. List the stages by which the risk of exposure to environmental factors on human health is assessed:**

- a) risk profile.
- b) exposure assessment.
- c) identification of harmful factors and assessment of their danger.
- d) assessment of the dose-response relationship.
- e) risk management.

**33. What is the state system for monitoring the quality of the environment and the state of health of the population?**

- a) a system of sanitary and epidemiological regulation.
- b) hygienic diagnostics.
- c) social and hygienic monitoring.
- d) federal system of hydrometeorological monitoring.
- e) risk assessment methodology.

**34. Endemic diseases are those that occur as a result of:**

- a) lack of minerals in the water.
- b) an excess of minerals in water, plants or soil.
- c) lack or excess of mineral substances in water, plants or animal organisms, soil in a limited area.
- d) as a result of a lack or excess of minerals in water, plants or animals, soil.

**35. The medical effectiveness of health care can be measured by indicators such as:**

- a) the prevalence of diseases
- b) "health index"
- c) use of new diagnostic and treatment technologies
- d) lethality.

**36. The effectiveness of health care is considered in the following aspects (missing fill in):**

- A. medical efficiency
- b. social efficiency
- V. \_\_\_\_\_

### **Test Evaluation Criteria**

Evaluation is carried out in an e-learning session on a 100-point scale.

The test includes 100 tasks, the maximum score for the test is 100.

Within the framework of the current level of assimilation of knowledge in the discipline, a test result of at least 61 points is allowed.

### **Abstract Evaluation Criteria**

- 100-86 points are given if the master expressed his opinion on the formulated problem, argued it, accurately defining its content and components. The data of domestic and foreign literature, statistical information, information of a regulatory nature are given. The master knows and owns the skill of independent research work on the research topic; methods and techniques for analyzing the theoretical and / or practical aspects of the area under study.



- 85-76 - points - the work is characterized by semantic integrity, coherence and consistency of presentation; no more than 1 mistake was made when explaining the meaning or content of the problem. For argumentation, data of domestic and foreign authors are given. Demonstrated research skills and abilities. There are no actual errors related to understanding the problem.

- 75-61 points - the master conducts a fairly independent analysis of the main stages and semantic components of the problem; understands the basic foundations and theoretical justification of the chosen topic. The main sources on the topic under consideration are attracted. No more than 2 errors were made in the sense or content of the problem.

- 60-50 points - if the work is a retold or completely rewritten source text without any comments or analysis. The structure and theoretical component of the topic is not disclosed. Three or more than three errors were made in the semantic content of the problem being disclosed.