

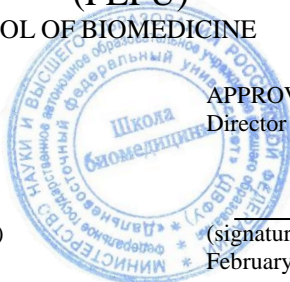


MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE RUSSIAN FEDERATION  
Federal State Autonomous Educational Institution of Higher Education  
**"Far Eastern Federal University"**  
(FEFU)  
SCHOOL OF BIOMEDICINE

AGREED  
Head of OP

(signature)  
February 02, 2021

Yu.S. Khotimchenko  
(FULL NAME)



APPROVE

Director of the Department of Pharmacy and Pharmacology

E.V. Khozhaenko  
(signature) (I.O. Surname)  
February 02, 2021

**WORKING PROGRAM OF THE DISCIPLINE**

health technology assessment

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 1, semester 2  
lectures at 6 p.m.  
practical classes 36 hours.  
laboratory work is not provided  
total classroom hours 54 hours.  
independent work 54 hours.  
credit 2 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 a meeting of the Department of Pharmacy and Pharmacology Protocol No. 5 dated January 28, 2021

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

Compiled by: Candidate of Medical Sciences, Associate Professor Borovskaya N.A.

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. \_\_\_\_\_
2. 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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1. Goals and objectives of mastering the discipline:

Target:

Study of the medical technology assessment system.

Tasks:

- quality of medical technologies;
- economic efficiency of medical technologies;
- public health and factors determining it;
- systems that ensure the preservation, strengthening and restoration of public health;
- organizational, medical and management technologies;
- health care development trends in foreign countries and in Russia.

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-4 The ability to analyze and evaluate the performance of a medical organization, manage the resources of a medical organization, develop and implement a quality management system in a medical organization, prepare a rationale for the volume of medical care in accordance with the resources of a medical organization and the needs of the population	PC-4.1 Knows the methodology for a comprehensive assessment of the performance of a medical organization PC-4.2 Able to develop and select the best areas for the activities of a medical organization PC-4.3 Possesses the skills of a systematic approach when developing development plans
organizational and managerial	PC-6 The ability to develop plans and programs, form a system of indicators for the activities of a medical organization, evaluate the effectiveness of a medical organization, develop options for management decisions and assess the risks associated with their implementation	PC-6.1 Knows the features of the formation of a system of indicators of a medical organization PC-6.2 Is able to evaluate the effectiveness of the medical organization, taking into account the formed system of indicators PC-6.3 Has the skills to form performance indicators, evaluate their effectiveness, as well as the ability to develop management decisions with an assessment of the risks associated with their implementation

Code and name of the indicator of achievement of competence	Name of the assessment indicator (the result of training in the discipline)
PC-4.1 Knows the methodology for a comprehensive assessment of the performance of a medical organization	Knows the methodology for a comprehensive assessment of the results of the activities of a medical organization Able to conduct a comprehensive assessment of the performance of a medical organization Possesses the skill of conducting a comprehensive assessment of the results of the activities of a medical organization
PC-4.2 Able to develop and select the best areas for the activities of a medical organization	Knows the optimal areas of activity of a medical organization Able to develop and select the optimal areas of activity of a medical organization Possesses the skill of developing the optimal direction for the activities of a medical organization
PC-4.3 Possesses the skills of a systematic approach when developing development plans	Knows a systematic approach when developing plans for the development of a medical organization Able to work out Possesses the skills of a systematic approach in the development of development plans
PC-6.1 Knows the features of the formation of a system of indicators of a medical organization	Knows the features of the formation of a system of indicators of a medical organization Able to form and fulfill the indicators of a medical organization Possesses the skill of forming and fulfilling the indicators of a medical organization
PC-6.2 Is able to evaluate the effectiveness of the medical organization, taking into account the formed system of indicators	Knows the main performance indicators of a medical organization Knows how to evaluate the effectiveness of the activities of a medical organization, taking into account the formed system of indicators Possesses the skill of evaluating the effectiveness of the activities of a medical organization, taking into account the formed system of indicators
PC-6.3 Has the skills to form performance indicators, evaluate their effectiveness, as well as the ability to develop management decisions with an assessment of the risks associated with their implementation	Knows the main performance indicators of a medical organization Knows how to form performance indicators, evaluate their effectiveness, assess the risks associated with their implementation Possesses the skills of forming performance indicators, evaluating their effectiveness, as well as the ability to develop management decisions with an assessment of the risks associated with their implementation

For the formation of the above competencies within the framework of the discipline "Health technology assessment" 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).

2.The complexity of the discipline and types of training sessions in the discipline.

The total labor intensity of the discipline is 3 credit units (108academichours).

(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

No.	Section name disciplines	Semester	The number of hours by type of training sessions and work of the student						Forms of intermediate certification
			Lek	lab	Etc	OK	SR	Control	
1	Topic 1. Evidence-based medicine in the assessment of medical technologies		4				6		
	Topic 2. Randomized controlled trials		2				6		
2	Topic 3. Methodological and organizational approaches to assessing medical technologies		4				6		
3	Topic 4. Ethics in the evaluation of medical technologies		4				6		
4	Topic 5. Prospects for the implementation of health technology assessment		4				6		

5	Lesson 1. National standard of the Russian Federation. Assessment of medical technologies. Application area. Regulations. Types of medical technologies				8		6		
	Lesson 2. Goals and objectives of medical technology assessment. Organization of medical technology assessment				4		6		
6	Lesson 3. The procedure for assessing medical technology				8		4		
7	Session 4. Evaluation of the scientific validity of the results of studies of the effectiveness, efficiency and safety of medical technology				8		4		
8	Session 5: Summarizing and evaluating medical technology information				8		4		
	Total:	2	18	-	36	-	54		offset

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

**(18 hours, including using MAO - 4 hours)**

Topic 1. Evidence-based medicine in the evaluation of medical technologies. (4 hours)

Medical technology assessment is a comprehensive process of summarizing information about medical technology aimed at optimizing decision-making, which examines the short-term and long-term medical, social, economic and ethical aspects of the development, dissemination and application of medical technology, conducted using open, unbiased, systematic and sustainable procedures. Medical technologies - methods of diagnostics, drug and non-drug treatment, prevention and rehabilitation, health protection and promotion systems used in healthcare

Topic 2. Randomized controlled trials (2 hours)

Medical technology clinical research design. Descriptive observational studies. Analytical research - observations.

Topic 3. Methodological and organizational approaches to assessing medical technologies (4 hours)

The procedure for assessing medical technologies: initialization, stages, selection of an assessment topic, plan (protocol), requirements for finding relevant information.

Topic 4. Ethics in medical technology assessment (4 hours)

Topic 5. Prospects for the implementation of health technology assessment (4 hours)

Clinical and economic research. Clinical and economic analysis. Evaluation of typical patient management practices. Patient registers.

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

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

Lesson 1. National standard of the Russian Federation. Assessment of medical technologies. Application area. Regulations. Types of medical technologies (8 hours)

1. The object of evaluation of medical technology.
2. Subject of medical technology assessment.
3. Validity of medical technology.
4. The effectiveness of medical technology.
5. Safety of medical technology.
6. Economy of medical technology.
7. Ethics and legality of medical technology.

Lesson 2. Goals and objectives of medical technology assessment. Organization of medical technology assessment (4 hours)

1. Health Technology Assessment Body.
2. Working Group on Health Technology Assessment.
3. Declaration of Conflict of Interest
4. Medical documentation.
5. Methods for evaluating the effectiveness of work.

Lesson 3. The procedure for assessing medical technology (8 hours)

1. Initialization of medical technology assessment.
2. Stages of medical technology assessment.
3. Choosing a topic for medical technology assessment.
4. Plan (protocol) for medical technology assessment.
5. Information sources.
6. Requirements for the search for relevant information.

Lesson 4. Evaluation of the scientific validity of the results of studies of the effectiveness, efficiency and safety of medical technology. (8 hours)

1. External validity of the study.
2. The internal validity of the study.
3. Medical technology clinical research design.
4. Clinical and economic research, analysis and modeling.

Lesson 5.Synthesis and evaluation of information about medical technology  
(8 hours)

1. Generalization of information about medical technology.
2. Features of the analysis of the results of clinical trials.
3. Systematic review and meta-analysis.
4. Interpretation of the results of clinical and economic analysis.
5. Brief evaluation of medical technology.
6. Social, legal and ethical aspects of the application of medical technology.
7. Formation of the report.

#### **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	1-6 weeks	Preparation of abstracts	18 hours	Protection
2	7-12 weeks	Presentation preparation	18 hours	Protection
3	13-18 weeks	Preparation to offset	18 hours	offset

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 study of lectures and preparation for a practical lesson, the preparation of a report on a selected aspect of the topic or the selection of practical material for participation in the discussion constitute the content of the student's independent work. Lecture notes, professional literature, educational and methodological support of the discipline can become the material for preparation. Forms of current control: survey, group discussion, presentation of the report.

One of the necessary components for the successful development of the course is writing an essay.

Independent work of students implies preparation for a lecture course, independent information search. Writing and defending the final test work form the skills of working with special literature, the ability to analyze current problems, as



well as the ability to logically correctly formulate the results of one's research in written and oral form.

### **List of types of independent work**

Preparation for a practical lesson, preparation of a report on a selected aspect of the topic of a practical lesson or selection of practical material for participation in the discussion constitute the content of an independent master's work. Lecture notes, professional literature, educational and methodological support of the discipline can become the material for preparation. Forms of current control: survey, group discussion, control tasks, report presentation.

Search and study of the latest theoretical and applied sources on social management in Internet resources.

Assessment of knowledge and skills is carried out at an intermediate control point after passing the appropriate section of the discipline. For methodological support of mastering the discipline, the department develops teaching aids (recommendations and instructions for students and teachers, etc.), which detail the goals and methods of conducting classes.

Independent work of students includes the study of teaching aids, materials, work on the Internet, which makes it possible to form the appropriate skills and abilities, is the foundation for making rational management decisions in the economic field of healthcare. Active use of computer teaching and control technologies in the educational process contributes to the formation of students' skills to use modern innovative educational programs.

One of the necessary components for the successful development of the course is writing an essay.

### **Recommendations for summarizing educational and scientific literature**

Abstracting educational and scientific literature involves an in-depth study of individual scientific works, which should ensure the development of the necessary skills to work on a book. All this will contribute to the expansion of scientific horizons, increase their theoretical training, and the formation of scientific competence.

Textbooks, individual monographic studies and articles on issues provided for by the program of the academic discipline are offered for abstracting. When selecting literature on the chosen issue, it is necessary to cover the most important directions in the development of this science at the present stage. Pay special attention to those literary sources that (directly or indirectly) can assist a specialist in his practical activities. However, this section also includes works and individual studies on issues that go beyond the discipline under study. This literature is recommended to use if you want to expand your knowledge in any branch of science.

Along with literature on general issues, masters are supposed to read literature, taking into account the profile of their professional activity, obtained independently. Not all of the proposed literature is equivalent in content and volume, so a different approach to its study is possible. In one case, this may be a general abstract of several literary sources by various authors devoted to the consideration of the same issue, in another case, a detailed study and abstract of one of the recommended works or even its individual sections, depending on the degree of complexity of the issue (problematics). In order to decide what to do in each case, you should consult with the teacher.

The choice of a specific work for abstracting should be preceded by a detailed acquaintance with the list of all literature given in the curriculum of the discipline. It is recommended that you first familiarize yourself with the selected work by viewing subtitles, highlighted texts, diagrams, tables, and general conclusions. Then it must be read carefully and thoughtfully (delving into the ideas and methods of the author), making notes along the way on a separate sheet of paper about the main provisions, key issues. After reading, you should think over the content of the article or a separate chapter, paragraph (if we are talking about a monograph) and briefly write it down. Literally, only strict definitions, formulations of laws should be written out. Sometimes it is helpful to include one or two examples in the entry to illustrate. In the event that there are incomprehensible places, it is recommended to read the following presentation,

The result of work on literary sources is an abstract.

When preparing an abstract, it is necessary to highlight the most important theoretical provisions and substantiate them independently, paying attention not only to the result, but also to the methodology used in studying the problem. Reading scientific literature should be critical. Therefore, one should strive not only to assimilate the main content, but also the method of proof, to reveal the features of different points of view on the same issue, to evaluate the practical and theoretical significance of the results of the work being reviewed. A highly desirable element of the abstract is the listener's expression of his own attitude to the ideas and conclusions of the author, supported by certain arguments (personal experience, statements of other researchers, etc.).

Abstracts of monographs, journal articles of a research nature must certainly contain, as already mentioned above, the definition of the problem and specific objectives of the study, a description of the methods used by the author, as well as the conclusions that he came to as a result of the study. The proposed literature for referencing is constantly updated.

### **Goals and objectives of the abstract**

An abstract (from Latin *refero* - I report, I report) is a summary of a practical or theoretical problem with the formulation of certain conclusions on the topic under consideration. The problem chosen by the student is studied and analyzed on the basis of one or more sources. Unlike term paper, which is a comprehensive study of the problem, the abstract is aimed at analyzing one or more scientific papers.

*Goals* essay writing are:

- developing students' skills to search for topical problems of modern legislation;
- developing the skills of concise presentation of the material, highlighting only the most significant points necessary to reveal the essence of the problem;
- developing the skills of analyzing the studied material and formulating one's own conclusions on the chosen issue in writing, in a scientific, literate language.

*tasks* essay writing are:

- to teach the student to accurately convey the opinions of the authors, on the basis of whose work the student writes his essay;
- to teach the student to correctly express his position on the problem analyzed in the abstract;
- prepare the student for further participation in scientific and practical conferences, seminars and competitions;
- help the student decide on the topic of interest to him, the further disclosure of which can be carried out when writing a term paper or diploma;
- to clarify for themselves and state the reasons for their agreement (disagreement) with the opinion of one or another author on this issue.

### **Basic requirements for the content of the abstract**

The student should use only those materials (scientific articles, monographs, manuals) that are directly related to the topic he has chosen. Distracted reasoning that is not related to the analyzed problem is not allowed. The content of the abstract should be specific, only one problem should be investigated (several are allowed, only if they are interconnected). The student must strictly adhere to the logic of presentation (start with the definition and analysis of concepts, move on to posing the problem, analyze ways to solve it and draw appropriate conclusions). The abstract should end with a conclusion on the topic.

In its structure, the abstract consists of:

1. Title page;
2. Introductions, where the student formulates a problem to be analyzed and researched;

3. The main text, in which the chosen topic is consistently revealed. Unlike a term paper, the main text of the abstract involves the division into 2-3 paragraphs without highlighting chapters. If necessary, the text of the abstract can be supplemented with illustrations, tables, graphs, but they should not "overload" the text;

4. Conclusions, where the student formulates conclusions based on the main text.

5. List of used literature. This list refers to both those sources that the student refers to when preparing the essay, and others that were studied by him when preparing the essay.

The volume of the abstract is 10-15 pages of typewritten text, but in any case should not exceed 15 pages. Spacing - 1.5, font size - 14, margins: left - 3 cm, right - 1.5 cm, top and bottom - 1.5 cm. Pages must be numbered. The paragraph indent from the beginning of the line is 1.25 cm.

### **The procedure for submitting the abstract and its evaluation**

Abstracts are written by students during the semester within the time limits set by the teacher in a particular discipline, reported by the student and submitted for discussion. The printed version is handed over to the teacher leading the discipline.

Based on the results of the test, the student is given a certain number of points, which is included in the total number of student points scored by him during the semester. When evaluating the abstract, the correspondence of the content to the chosen topic, the clarity of the structure of the work, the ability to work with scientific literature, the ability to pose a problem and analyze it, the ability to think logically, knowledge of professional terminology, literacy of design are taken into account.

### **Guidelines for preparing presentations**

General presentation requirements:

- presentation should not be less than 10 slides;
- the first page is the title page, which must be presented: the name of the project; surname, name, patronymic of the author;
- the next slide should be the content, which presents the main stages (moments) of the presentation; it is desirable that from the content using a hyperlink you can go to the required page and return to the content again;
- design-ergonomic requirements: color compatibility, limited number of objects per slide, text color;
- The last slides of the presentation should be a glossary and bibliography.

## **Topics and list of abstracts**

1. Medical ethics and deontology. Fulfillment of medical duty, legal and moral aspects of medical secrecy and medical errors.
2. Planirovaniye of health care in the conditions of market relations. planning methods.
3. The concept of medical statistics. Importance and use of statistics in socio-hygienic research and for assessing the performance of a healthcare organization.
4. Statistical population, its types and group properties.
5. Relative values in statistics, their meaning and application. Possible errors in case of incorrect application of relative values.
6. Evidence-based medicine, concept, role and place in the healthcare system.
7. Gradation of recommendations based on levels of evidence in the system of evidence-based medicine. Levels of evidence in the system of evidence-based medicine.
8. Clinical studies, classification, characteristics of each type.
9. Systematic review and meta-analysis in the system of evidence-based medicine.

## **Criteria for assessing students' 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 the knowledge of masters, 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.

If the abstract meets all the requirements for design and content, then the student receives a maximum of 100 points for its implementation. If the abstract is made with minor flaws, such as using fewer sources or not fully disclosing certain issues, then the student receives 75-99 points. If the teacher believes that the topic is only half disclosed, but the main issues of the topic are still touched upon, only one or two sources are used, then the student receives 50-74 points. If the topic of the abstract is not disclosed, there are no references to the literature, and the

student does not answer the questions asked on the abstract, then the score for the abstract is not set.

## **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	National standard of the Russian Federation. Grade medical technologies. Application area. Regulations. Types of medical technologies	PC-6.1; PC-6.2; PC-6.3; PC-4.1; PC-4.2; PC-4.3	Knows:	basics of organizing health technology assessment	Interview UO-1, Abstract PR-4	offset Questions 1-4
			Can	organize and evaluate technologies used in healthcare for the provision of high-quality medical care to the population;	PR-1 tests, typical calculations	
			owns	the ability to identify, based on the results of the assessment, the quality of medical care and use databases to search for evidence of the validity of decisions made	Interview UO-1 PR-1 tests	
2	Goals and objectives of medical technology assessment. Organization of medical technology assessment	PC-6.1; PC-6.2; PC-6.3; PC-4.1; PC-4.2; PC-4.3	Knows	Health Technology Assessment Body	Interview UO-1, Abstract PR-4	offset Questions 5-8
			Can	Establish a Health Technology Assessment Working Group	PR-1 tests, typical calculations	
			owns	Medical documentation and methods for evaluating performance	Interview UO-1 PR-1 tests	
3	The procedure for assessing medical technology	PC-6.1; PC-6.2; PC-6.3; PC-4.1; PC-4.2; PC-4.3	Knows	Stages of medical technology assessment	Interview UO-1, Abstract PR-4 PR-1 tests, typical calculations	offset Questions 9-12
			Can	Use Medical Technology Assessment Topic Selection	Interview UO-1 PR-1 tests	
			owns	Plan (protocol) for medical technology	Interview UO-1,	



				assessment	Abstract PR-4	
4	Evaluation of the scientific validity of the results of studies of the effectiveness, efficiency and safety of medical technology	PC-6.1; PC-6.2; PC-6.3; PC-4.1; PC-4.2; PC-4.3	Knows	External and internal validity of studies	Interview UO-1, Abstract PR-4	offset Questions 13-16
			Can	Apply medical technology clinical research design	PR-1 tests, typical calculations	
			owns	Methods of clinical and economic research, analysis and modeling	Interview UO-1 PR-1 tests	
5	Synthesis and evaluation of information on medical technology	PC-6.1; PC-6.2; PC-6.3; PC-4.1; PC-4.2; PC-4.3	Knows	Rules for summarizing information about medical technology	Interview UO-1, Abstract PR-4	offset Questions 17-20

## VII. EDUCATIONAL AND METHODOLOGICAL SUPPORT OF DISCIPLINE

### Main literature

1. Public health and healthcare [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>

2. Public health and healthcare [Electronic resource]: textbook / V.A. Medic, V.I. Lisitsin. - 4th ed., revised. and additional - M. : GEOTAR-Media, 2016. - 496c.<http://www.studentlibrary.ru/book/ISBN9785970437018.htm>

3. Public health and healthcare [Electronic resource]: textbook / V. A. Medic, V. K. Yuriev. - 3rd ed., revised. and additional - M. : GEOTAR-Media, 2015. - 288c.<http://www.studentlibrary.ru/book/ISBN9785970433256.html>

4. Health Economics [Electronic resource] / Reshetnikov A.V. - M. : GEOTAR-Media, 2015.<http://www.studentlibrary.ru/book/ISBN9785970431368.html>

5. Modeling and forecasting the quality of life of pregnant women and ways to improve it [Electronic resource] / V.I. Starodubov [i dr.]. — Electron. text data. - Voronezh: Voronezh Institute of High Technologies, Origins, 2014. - 186 p. — 978-5-88242-739-8. - Access mode:<http://www.iprbookshop.ru/23350.html>

6. Lisitsin Yu.P., Ulumbekova G.E. Public health and healthcare. - GEOTAR-Media. - 2013. - 544 p. Access mode:<http://www.studentlibrary.ru/book/ISBN9785970426548.html>

### **additional literature**

1. Lisitsyn Yu.P., Ulumbekova G.E. Public health and health care: a textbook. - M. : GEOTAR - Media, 2016. - 542 p. <http://lib.dvfu.ru:8080/lib/item?id=chamo:781664&theme=FEFU>
2. Lisitsyn Yu.P., Ulumbekova G.E. Public health and healthcare. - GEOTAR-Media. - 2013. - 544 p. Access mode: <http://www.studentlibrary.ru/book/ISBN9785970426548.html>
3. Pokrovsky V.I., Briko N.I. General epidemiology with the basics of evidence-based medicine GEOTAR-Media. - 2012. - 400 p. Access mode: <http://www.studentlibrary.ru/book/ISBN9785970417782.html>
4. Petrov V.I., Nedogoda S.V. Evidence Based Medicine GEOTAR-Media. - 2012. - 144 p. Access mode: <http://www.studentlibrary.ru/book/ISBN9785970423219.html>
5. Health economics: textbook. 2nd ed. / Ed. A.V. Reshetnikov. - M.: GEOTAR-Media, 2010. - 272 p. Access mode: <http://www.studmedlib.ru/book/ISBN9785970416044.html>
6. Reference and legal system Consultant - Plus.
7. Website of the Ministry of Health of the Russian Federation <https://www.rosminzdrav.ru/>
8. Website of the World Health Organization <http://www.who.int/ru/>
9. Official website of the Federal Service for Surveillance in Healthcare <http://www.roszdravnadzor.ru/>

### **The list of resources of the information and telecommunication network "Internet" necessary for mastering the discipline**

1. [www.biblioclub.ru](http://www.biblioclub.ru/)- Electronic library system "University Library"
2. <http://e.lanbook.com/>- Electronic library system of the publishing house "Lan"
3. <http://ibooks.ru/>- Electronic library system "Ibux"
4. <http://dlib.eastview.com/>- Databases of the company "East View"
5. <http://www.elibrary.ru/>- Scientific Electronic Library (NEB)
6. <http://www.rba.ru/> - Information resources of the Russian Library Association (RBA)
7. <http://uisrussia.msu.ru> - University Information System Russia (UIS Russia)
8. <http://www.hist.msu.ru/> - Faculty of History of Moscow State University
9. <http://www.shpl.ru/> - State Public Historical Library (electronic catalog)
10. <http://www.rsl.ru/> - Russian State Library (electronic catalog)

eleven.<http://www.dvfu.ru/web/library/elib/>- Catalog of electronic resources of the FEFU Scientific Library

12.<http://school-collection.edu.ru/catalog/>- Unified collection of educational resources

13.<http://www.school.edu.ru/>- "Russian educational portal"

14.<http://www.humanities.edu.ru/index.html>- Portal "Humanities Education"

15.<http://www.magister.msk.ru/library/library.htm>- "Publishing of literature in electronic form"

16.<http://ifets.ieee.org/english/depository/resource.htm>- "IT education in Runet" Educational resources of Runet

17. Student Library <http://www.studmedlib.ru>

18.<http://med-lib.ru/speclit/patfiz/index.php>

19.<http://www.medliter.ru/?page=list&id=09>

20. Spravochno-legal system Consultant plus.

21. <http://www.rosminzdrav.ru> Official website of the Ministry of Health of the Russian Federation

22. <http://meduniver.com> Medical site about various fields of medicine

### **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**

The theoretical part of the discipline "Health technology assessment" is revealed in lectures, since the lecture is the main form of education, where the teacher gives the basic concepts of the discipline.

*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.

## 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 -	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-

level 10)	<p>bit)+Win8.1Pro(64-bit),1-1-1 Wty Internet access speed 500 Mbps.</p> <p>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</p>
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## 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
organizational and managerial	PC-4 The ability to analyze and evaluate the performance of a medical organization, manage the resources of a medical organization, develop and implement a quality management system in a medical organization, prepare a rationale for the volume of medical care in accordance with the resources of a medical organization and the needs of the population	PC-4.1 Knows the methodology for a comprehensive assessment of the performance of a medical organization PC-4.2 Able to develop and select the best areas for the activities of a medical organization PC-4.3 Possesses the skills of a systematic approach when developing development plans
organizational and managerial	PC-6 The ability to develop plans and programs, form a system of indicators for the activities of a medical organization, evaluate the effectiveness of a medical organization, develop options for management decisions and assess the risks associated with their implementation	PC-6.1 Knows the features of the formation of a system of indicators of a medical organization PC-6.2 Is able to evaluate the effectiveness of the medical organization, taking into account the formed system of indicators PC-6.3 Has the skills to form performance indicators, evaluate their effectiveness, as well as the ability to develop management decisions with an assessment of the risks associated with their implementation

Code and name of the indicator of	Name of the assessment indicator
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achievement of competence	(the result of training in the discipline)
PC-4.1 Knows the methodology for a comprehensive assessment of the performance of a medical organization	Knows the methodology for a comprehensive assessment of the results of the activities of a medical organization Able to conduct a comprehensive assessment of the performance of a medical organization Possesses the skill of conducting a comprehensive assessment of the results of the activities of a medical organization
PC-4.2 Able to develop and select the best areas for the activities of a medical organization	Knows the optimal areas of activity of a medical organization Able to develop and select the optimal areas of activity of a medical organization Possesses the skill of developing the optimal direction for the activities of a medical organization
PC-4.3 Possesses the skills of a systematic approach when developing development plans	Knows a systematic approach when developing plans for the development of a medical organization Able to work out Possesses the skills of a systematic approach in the development of development plans
PC-6.1 Knows the features of the formation of a system of indicators of a medical organization	Knows the features of the formation of a system of indicators of a medical organization Able to form and fulfill the indicators of a medical organization Possesses the skill of forming and fulfilling the indicators of a medical organization
PC-6.2 Is able to evaluate the effectiveness of the medical organization, taking into account the formed system of indicators	Knows the main performance indicators of a medical organization Knows how to evaluate the effectiveness of the activities of a medical organization, taking into account the formed system of indicators Possesses the skill of evaluating the effectiveness of the activities of a medical organization, taking into account the formed system of indicators
PC-6.3 Has the skills to form performance indicators, evaluate their effectiveness, as well as the ability to develop management decisions with an assessment of the risks associated with their implementation	Knows the main performance indicators of a medical organization Knows how to form performance indicators, evaluate their effectiveness, assess the risks associated with their implementation Possesses the skills of forming performance indicators, evaluating their effectiveness, as well as the ability to develop management decisions with an assessment of the risks associated with their implementation

### 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	National standard of the Russian Federation. Grade medical technologies. Application area. Regulations. Types of medical technologies	PC-6.1; PC-6.2; PC-6.3; PC-4.1; PC-4.2; PC-4.3	Knows:	basics of organizing health technology assessment	Interview UO-1, Abstract PR-4	offset Questions 1-4
			Can	organize and evaluate technologies used in healthcare for the provision of high-quality medical care to the population;	PR-1 tests, typical calculations	
			owns	the ability to identify, based on the results of the assessment, the quality of medical care and use databases to search for evidence of the validity of decisions made	Interview UO-1 PR-1 tests	
2	Goals and objectives of medical technology assessment. Organization of medical technology assessment	PC-6.1; PC-6.2; PC-6.3; PC-4.1; PC-4.2; PC-4.3	Knows	Health Technology Assessment Body	Interview UO-1, Abstract PR-4	offset Questions 5-8
			Can	Establish a Health Technology Assessment Working Group	PR-1 tests, typical calculations	
			owns	Medical documentation and methods for evaluating performance	Interview UO-1 PR-1 tests	
3	The procedure for assessing medical technology	PC-6.1; PC-6.2; PC-6.3; PC-4.1; PC-4.2; PC-4.3	Knows	Stages of medical technology assessment	Interview UO-1, Abstract PR-4 PR-1 tests, typical calculations	offset Questions 9-12
			Can	Use Medical Technology Assessment Topic Selection	Interview UO-1 PR-1 tests	
			owns	Plan (protocol) for medical technology assessment	Interview UO-1, Abstract PR-4	
4	Evaluation of the scientific validity of the	PC-6.1; PC-6.2; PC-6.3;	Knows	External and internal validity of studies	Interview UO-1, Abstract PR-	offset Questions 13-

	results of studies of the effectiveness, efficiency and safety of medical technology	PC-4.1; PC-4.2; PC-4.3			4	16
			Can	Apply medical technology clinical research design	PR-1 tests, typical calculations	
			owns	Methods of clinical and economic research, analysis and modeling	Interview UO-1 PR-1 tests	
5	Synthesis and evaluation of information on medical technology	PC-6.1; PC-6.2; PC-6.3; PC-4.1; PC-4.2; PC-4.3	Knows	Rules for summarizing information about medical technology	Interview UO-1, Abstract PR-4	offset Questions 17-20

**Competence level assessment scale  
in the discipline "Health technology assessment"**

Code and wording of competence	Stages of competence formation		Criteria	Indicators	Points
PC-4 The ability to analyze and evaluate the performance of a medical organization, manage the resources of a medical organization, develop and implement a quality management system in a medical organization, prepare a rationale for the volume of medical care in accordance with the resources of a medical organization and the needs of the population	knows (threshold level)	basics of planning and organizing measures to ensure the protection of public health in accordance with the resources of the medical organization and the needs of the population	knowledge of the basics of planning and organizing measures to ensure the protection of public health in accordance with the resources of the medical organization and the needs of the population	the ability to explain and apply in practice the basics of planning and organizing activities to ensure the protection of public health in accordance with the resources of the medical organization and the needs of the population	61-70
	can (advanced)	properly draw up official medical documents, maintain primary medical records, take measures to ensure health protection, analyze and evaluate the performance of a medical organization	analyze and evaluate the performance of a medical organization, manage the resources of a medical organization, develop and implement quality management systems in a medical organization,	ability to analyze and evaluate the performance of a medical organization, manage the resources of a medical organization, develop and implementation of a quality management system in a medical organization in	71-84

			justify the volume of medical care in accordance with the resources of a medical organization and the needs of the population	accordance with the resources of a medical organization and the needs of the population	
	owns (high)	methods of planning and organizing measures to ensure the protection of public health, development and implementation of a quality management system in a medical organization, preparation of a rationale for the volume of medical care in accordance with the resources of a medical organization and the needs of the population	possession of methods for planning and organizing measures to ensure the protection of public health, analysis and evaluation of performance indicators of a medical organization, resource management of a medical organization, development and implementation of a quality management system in a medical organization	ability analyzing and evaluating the performance of a medical organization, managing the resources of a medical organization, developing and implementing a quality management system in a medical organization, preparing a justification for the volume of medical care in accordance with the resources of a medical organization and the needs of the population	85-100
PC-6 the ability to develop plans and programs, form a system of indicators for the activities of a medical organization, evaluate the effectiveness of a medical organization, develop options for management decisions and	knows (threshold level)	fundamentals of planning and principles of organizing and implementing measures to ensure the protection of public health, the main indicators of the activities of a medical organization	the basics of planning measures to ensure the protection of public health and is able to evaluate the effectiveness of a medical organization	application of the basics of planning measures to ensure the protection of public health, a system of indicators of the activities of a medical organization, taking into account management decisions	65-71
	can	plan measures to	properly draw	realize	71-84

assess the risks associated with their implementation	(advanced )	ensure the protection of public health; develop plans and programs, form a system of indicators for the activities of a medical organization	up official medical documents, maintain primary medical records, develop options for management decisions and assess the risks associated with their implementation	measures to ensure the protection of public health, form a system of indicators of the activities of a medical organization, evaluate the effectiveness of the activities of a medical organization	
	owns (high)	skills in planning, organizing and implementing measures to ensure the protection of public health	skills in preparing a rationale for the volume of medical care in accordance with the resources of a medical organization and the needs of the population	justification of the volume of medical care in accordance with the resources of the medical organization and the needs of the population, options for management decisions and risk assessment associated with their implementation	85-100

### **Methodological recommendations that determine the procedures for evaluating the results of mastering the discipline**

**Current certification of students.** It is carried out in accordance with the local regulations of the Far Eastern Federal University and is mandatory. It is carried out in the form of control measures: the defense of a test, an interview to assess the actual results of students' learning and is carried out by a 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 (survey);
- the level of mastery of practical skills and abilities in all types of educational work (colloquium);
- results of independent work.

**Intermediate certification of students.** It is carried out in accordance with the local regulations of the Far Eastern Federal University and is mandatory. Provides for the accounting of the results of all stages of the development of the course. Provided that two stages of the current attestation have been successfully passed, the student is given an intermediate attestation (test, exam).

**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.

*Certification* students in the discipline "Health technology assessment" is carried out in accordance with the local regulations of FEFU in the form of a test.

### **I. Evaluation tools for certification**

#### **Questions for offset**

1. Basic principles of state policy in the field of public health protection.
2. Public health and health care as a science. History of development, methods, main sections.
3. Health management. Management principles, management as a process, management cycle.
4. Legislative framework for primary health care in Russia.
5. What is evidence-based medicine.
6. Regulatory framework for the assessment of medical technologies.
7. Types of medical technologies.
8. Types of studies (study design).
9. What is a conflict of interest?
10. The rights of citizens in the assessment of medical technologies.
11. cohort study.
12. Pilot study of medical intervention.
13. Experimental study of a diagnostic test.
14. Systematic review, meta-analysis.
15. A study of the evaluation of the results of the application of medical technology by patients.
16. Patient registers.
17. The rights of citizens to information about the state of their health (Constitution of the Russian Federation, Federal Law "On the Fundamentals of Protecting the Health of Citizens in the Russian Federation").
18. Management, purpose, tasks, role in the healthcare system.
19. The concept of rational pharmaceutical management.

20. Structure of a medical technology brief assessment report.

**Criteria for grading a student in the test for the discipline "Health technology assessment"**

<b>Credit score</b>	<b>Requirements for the formed competencies</b>
"passed"	The grade "passed" is given to the student if he knows the material well, presents it competently and to the point, avoids significant inaccuracies in answering the question, correctly applies the theoretical provisions in solving practical issues and tasks, possesses the necessary skills and techniques for their implementation
"not counted"	The "failed" mark is given to a student who does not know a significant part of the program material, makes significant mistakes, uncertainly, with great difficulty answers the questions posed. As a rule, the "failed" mark is given to students who cannot continue their studies without additional classes in the relevant discipline.

**Evaluation tools for current certification**

**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.