



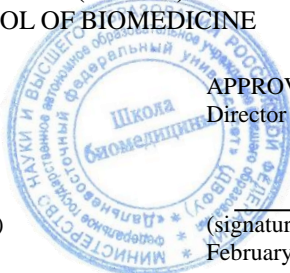
MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE RUSSIAN FEDERATION  
Federal State Autonomous Educational Institution of Higher Education  
**"Far Eastern Federal University"**  
(FEFU)

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**

Current issues of epidemiology

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 9 o'clock.

practical classes 36 hours.

Including using MAO lek.4 hours/practice. 10 o'clock

total classroom hours 45 hours.

including using MAO 14 hours

independent work 63 hours.

including preparation for the exam 54 hours.

control works (quantity) are not provided

term paper / term project are not provided

exam 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 V.G. Moreva

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:

studying the discipline "Current issues of epidemiology" is to improve knowledge and practical skills to identify the causes of the occurrence and spread of pathological conditions among the population and substantiate, using the principles of evidence-based medicine, decisions on the implementation of preventive and anti-epidemic measures necessary in the implementation of professional activities in healthcare institutions.

### Tasks:

- on the main theoretical provisions of epidemiology, their application, taking into account the modern characteristics of diseases in the population;
- to identify risk factors and establish cause-and-effect relationships in the system of public health - environment;
- on the use of information technologies in practical activities, including data from evidence-based medicine;
- training in the ability to make decisions in situations of risk;
- development of the ability to independently evaluate the results of their activities;
- on the organization of preventive and anti-epidemic measures based on the results of epidemiological diagnostics.

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
	PC-1 Ability to calculate, evaluate and analyze indicators characterizing the activities of a medical organization, and indicators characterizing the state of public health	PC-1.1 Knows the principles of collecting and processing information PC-1.2 Can create a data matrix, code the material PC-1.3 Owns statistical methods of data processing, including using information and analytical systems and the information and telecommunication network "Internet"

Task type	Code and name of professional competence (result of development)	Code and name of the indicator of achievement of competence
	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

Code and wording of competence	Stages of competence formation
PC-1.1 Knows the principles of collecting and processing information	Knows the principles of collecting, processing, analyzing and providing information Able to collect, process, analyze and provide information in their professional activities Possesses the skill of collecting, processing, analyzing and providing information in their professional activities
PC-1.2 Can create a data matrix, code the material	Knows how to encode information Able to create a data matrix, conduct material coding Proficient in coding material
PC-1.3 Owns statistical methods of data processing, including using information and analytical systems and the information and telecommunication network "Internet"	Knows the basic methods of data processing, including using information and analytical systems and the information and telecommunications network "Internet" Ability to process and present data Owns statistical methods of data processing, including using information and analytical systems and information and telecommunications network "Internet"
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
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To form the above competencies within the framework of the discipline "Current issues of epidemiology", 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 labor intensity of the discipline is 3 credit units (108academic 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

## III. 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 I. General epidemiology		3						
2	Section II. Private epidemiology		3						
3	Section III. Epidemiology of noncommunicable diseases		3						

4	Lesson 1. Epidemiological approach to the study of human diseases. Subject and object of research				4				
	Lesson 2. Organization and conduct of an epidemiological study				4				
	Lesson 3. The doctrine of the epidemic process. Fundamentals of population (epidemiological) diagnostics				4				
	Lesson 4. Preventive and anti-epidemic measures and the basics of organizing anti-epidemic work. Epidemiological surveillance of infectious diseases				4				
5	Lesson 5. Anti-epidemic measures in case of emergencies. Assessment of the quality and effectiveness of preventive and anti-epidemic measures				4				
6	Lesson 6. Epidemiology and prevention of nosocomial infections: features of the epidemiology and prevention of HSI in hospitals of various profiles				4				
7	Lesson 7. Epidemiology and prevention of anthroponoses with fecal-oral and aerosol transmission mechanism				4				
8	Lesson 8. Epidemiology and prevention of zoonotic and sapronous infections. Epidemiology and prevention of major helminthiases				4				
9	Session 9. Epidemiology and prevention of noncommunicable diseases				4				
	Total:	2	9	-	36	-	9	54	Exam

**IV. CONTENT OF THE THEORETICAL PARTS OF THE COURSE  
(9 hours, including using MAO - 4 hours.)**

**Section I. General epidemiology (3 hours)**

- General epidemiology. Subject and methods of epidemiology.

- The doctrine of the epidemic process.
- Basic principles of prevention and control of infectious diseases.
- The system of epidemiological surveillance and its information support.
- Methods of epidemiological research.
- Retrospective epidemiological analysis (REA).
- Operational (current) epidemiological analysis (TEA).
- Epidemiological diagnostics (ED).
- Anti-epidemic measures in emergency situations. Evaluation of the quality and effectiveness of preventive and anti-epidemic measures.

### **Section II. Private epidemiology (3 hours)**

- Infections of the respiratory tract (anthroponoses, sapronoses).
- Intestinal infections.
  - Anthroponoses. Typhoid fever and paratyphoid A and B, cholera, viral hepatitis A and E, shigellosis, dysentery, poliomyelitis.
  - Zoonoses. Salmonellosis, botulism and other food clostridium, brucellosis, leptospirosis, listeriosis. blood infections.
  - Viral hepatitis B, C, D. Malaria.
- Infections of the external integument. Rabies, tetanus.
- Natural focal infections. Tick-borne borreliosis, tularemia, Crimean hemorrhagic fever, Q fever.
  - Sexually transmitted infections. HIV infection (AIDS), urogenital chlamydia and ureaplasmosis, herpes infection.
  - Nosocomial infections. Features of the epidemiology of nosocomial infections, prevention measures.

### **Section III. Epidemiology of noncommunicable diseases (3 hours)**

Theoretical foundations of the epidemiology of noncommunicable diseases:

- reasons for the integration of non-communicable and infectious diseases;
- similarities and differences in the subject of study, causes, conditions and manifestations of morbidity, the mechanism of development and susceptibility.

Epidemiological studies on oncological, cardiovascular, pulmonary and other diseases based on publications of Russian and foreign researchers.

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

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

Lesson 1. Epidemiological approach to the study of human diseases. Subject and object of research (4 hours)

1. Formulation of the problem.
2. Goal definition.

3. Technology for completing the task, solving situational problems and interpreting the results.

Lesson 2. Organization and conduct of an epidemiological study (4 hours)

1. Formulation of the problem.

2. Goal definition.

3. Technology for completing the task, solving situational problems and interpreting the results.

Lesson 3. The doctrine of the epidemic process. Fundamentals of population (epidemiological) diagnostics (4 hours)

1. Formulation of the problem.

2. Goal definition.

3. Technology for completing the task, solving situational problems and interpreting the results.

Lesson 4. Preventive and anti-epidemic measures and the basics of organizing anti-epidemic work. Epidemiological surveillance of infectious diseases (4 hours)

1. Formulation of the problem.

2. Goal definition.

3. Technology for completing the task, solving situational problems and interpreting the results.

Lesson 5. Anti-epidemic measures in emergency situations. Assessment of the quality and effectiveness of preventive and anti-epidemic measures (4 hours)

1. Formulation of the problem.

2. Goal definition.

3. Technology for completing the task, solving situational problems and interpreting the results.

Lesson 6. Epidemiology and prevention of nosocomial infections: features of the epidemiology and prevention of HSI in hospitals of various profiles (4 hours)

1. Statement of the problem.

2. Definition of the goal.

3. Technology for completing the task, solving situational problems and interpreting the results.

Lesson 7. Epidemiology and prevention of anthroponoses with fecal-oral and aerosol transmission mechanism (4 hours)

1. Statement of the problem.

2. Definition of the goal.

3. Technology for completing the task, solving situational problems and interpreting the results.



Lesson 8. Epidemiology and prevention of zoonotic and sapronous infections. Epidemiology and prevention of major helminthiases (4 hours)

1. Statement of the problem.
2. Definition of the goal.
3. Technology for completing the task, solving situational problems and interpreting the results.

Lesson 9. Epidemiology and prevention of noncommunicable diseases (4 hours)

1. Statement of the problem.
2. Definition of the goal.
3. Technology for completing the task, solving situational problems and interpreting the results.

### **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	4	Protection
2	7-12 weeks	Presentation preparation	5	Protection
3	13-18 weeks	Exam preparation	54	Exam

### **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.

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.

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).

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### **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 the master'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, 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 for essays and presentations**

1. Evidence-based medicine as a system for improving the effectiveness of medical care.
2. Organization of epidemiological data.
3. Assessment of the level of morbidity of the population.
4. Parasitic system as the basis of the epidemic process. Driving forces and manifestations of the epidemic process.
5. Theory of self-regulation of parasitic systems. Regulatory role of social and natural conditions.
6. The concept of the epidemic process as a socio-ecological system (B.L. Cherkassky).
7. Preventive and anti-epidemic measures, their potential and actual effectiveness.
8. The doctrine of natural foci E.N. Pavlovsky. Basic provisions.
9. Components of the natural focus of transmissible zoonosis. landscape epidemiology.
10. Principles of prevention and control of infectious diseases.
11. Retrospective epidemiological analysis. Purpose, tasks, methods.
12. Measures to localize the epidemic focus.
13. Hospital infections, modern concepts.
14. The possibility and prospects for the elimination of infectious diseases. Stages of elimination of individual nosoforms.
15. Supervision of the quality of immunobiological preparations. Prospects for the design of new vaccines and immunobiological preparations of a new generation.
16. Regime activities. Disinfection (focal, prophylactic) - measures to prevent the formation of an epidemic process.
17. Modern ideas about the bacteriological safety of medical instruments and inventory.
18. Occupational contamination of medical personnel. The urgency of the problem.
19. Anti-epidemic measures for the localization of the source of AIO in health care facilities.

20. Organization of anti-epidemic measures in emergency situations. Extraordinary anti-epidemic commission: composition, tasks, functions and scope of work.

21. Evidence-based medicine as a system for improving the effectiveness of medical care.

22. Organization of epidemiological data.

23. Assessment of the level of morbidity of the population.

24. Parasitic system as the basis of the epidemic process. Driving forces and manifestations of the epidemic process.

25. Theory of self-regulation of parasitic systems. Regulatory role of social and natural conditions.

26. The concept of the epidemic process as a socio-ecological system (B.L. Cherkassky).

27. Preventive and anti-epidemic measures, their potential and actual effectiveness.

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39. Anti-epidemic measures for the localization of the source of AIO in health care facilities.

40. Organization of anti-epidemic measures in emergency situations. Extraordinary anti-epidemic commission: composition, tasks, functions and scope of work.



## **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.

### **Criteria for assessing students' independent work**

• 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 activities organized and carried out by the educational institution and student self-government bodies.

## VI. 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 General epidemiology	PC-1.1; PC-1.2; PC-1.3; PC-4.1; PC-4.2; PC-4.3	<p><b>Knows:</b></p> <ul style="list-style-type: none"> <li>• subject areas of epidemiology;</li> <li>• the basics of organizing and conducting epidemiological studies (descriptive-evaluative, analytical, experimental), their purpose and features of organization, sources of errors in epidemiological studies and ways to eliminate them. Legal and ethical aspects of epidemiological research;</li> </ul> <p><b>Can:</b></p> <ul style="list-style-type: none"> <li>• organize epidemiological studies;</li> <li>• conduct a retrospective assessment of the intensity, dynamics, structure, territorial distribution of morbidity (mortality, disability) in order to identify priority areas for preventive and anti-epidemic activities of medicine, the formation of hypotheses about risk factors;</li> </ul> <p><b>Owned by:</b></p> <ul style="list-style-type: none"> <li>• descriptive-evaluative and analytical methods of epidemiological</li> </ul>	Interview UO-1, Abstract PR-4, tests PR-1	Exam Questions 1-20

			<p>diagnostics;</p> <ul style="list-style-type: none"> <li>the ability to identify, based on the results of operational analysis, the prerequisites and precursors of complications of the epidemic situation</li> </ul>		
2	Section 2 Private epidemiology	PC-1.1; PC-1.2; PC-1.3; PC-4.1; PC-4.2; PC-4.3	<p><b>Knows:</b></p> <ul style="list-style-type: none"> <li>features of the epidemiology of the most important infectious, parasitic and non-communicable diseases and measures to combat them;</li> <li>theoretical, methodological and organizational foundations of epidemiological surveillance of individual groups and nosological forms of infectious, parasitic and non-infectious diseases;</li> </ul> <p><b>Can:</b></p> <ul style="list-style-type: none"> <li>collect, statistically and logically process information in order to assess the state of health and morbidity of the population and the factors that determine them;</li> <li>conduct a survey of epidemic foci and epidemically significant objects;</li> <li>to carry out epidemiological surveillance and control over certain groups and nosological forms of infectious, parasitic and non-infectious diseases;</li> <li>organize preventive and anti-epidemic measures and evaluate their quality and effectiveness;</li> <li>conduct a sanitary and epidemiological survey of facilities for compliance with the requirements of sanitary legislation;</li> </ul> <p><b>Owned by:</b></p>	Interview UO-1, Abstract PR-4, tests PR-1	Exam Questions 21-40

			<ul style="list-style-type: none"> <li>• the ability to formulate and evaluate hypotheses about the cause-and-effect relationships of morbidity with risk factors;</li> <li>• the ability to organize preventive and anti-epidemic measures based on the results of epidemiological diagnostics</li> </ul>		
3	Section 3 Epidemiology of noncommunicable diseases	PC-1.1; PC-1.2; PC-1.3; PC-4.1; PC-4.2; PC-4.3	<p><b>Knows:</b></p> <ul style="list-style-type: none"> <li>• principles of organizing preventive and anti-epidemic measures based on evidence-based medicine;</li> <li>• regulatory framework for activities;</li> </ul> <p><b>Can:</b></p> <ul style="list-style-type: none"> <li>• evaluate the formulated hypotheses based on the principles of evidence-based medicine;</li> <li>• conduct a prompt assessment of the epidemiological situation and the epidemic situation;</li> </ul> <p><b>Owned by:</b></p> <ul style="list-style-type: none"> <li>• the ability to use databases to find evidence of the validity of decisions made</li> </ul>	Interview UO-1, Abstract PR-4, tests PR-1	Exam Questions 41-60

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

### Main literature

1. Infectious diseases: textbook. allowance / I.A. Berezhnova. - M. : RIOR : INFRA-M, 2017. - 319 p. - (VO). - Access mode:<http://znanium.com/catalog/product/814376>

2. Infectious diseases [Electronic resource]: textbook / Alikeeva G. K. and others; Ed. N. D. Yushchuk, Yu. Ya. Vengerova. - 2nd ed., revised. and additional - M. : GEOTAR-Media, 2016. - 704c.<http://www.studentlibrary.ru/book/ISBN9785970436219.html>

3. Hospital epidemiology. Guide to practical exercises [Electronic resource] / L. P. Zueva [and others]; ed. L. P. Zueva - M. : GEOTAR-Media, 2015. - 416s.<http://www.studentlibrary.ru/book/ISBN9785970435397.html>

4. Yushchuk N.D. Epidemiology of infectious diseases / Yushchuk N.D. and others - M.: GEOTAR-Media, 2014. - 496 p.  
<http://www.studmedlib.ru/book/ISBN9785970428245.html>

5. Novikova V.P. Epidemiology [Electronic resource]: protocols for practical exercises for 5th year students enrolled in the specialty 060101 General Medicine / V.P. Novikov. — Electron. text data. - Cherkessk: North Caucasian State Humanitarian-Technological Academy, 2014. - 32 p. — 2227-8397. - Access mode:  
<http://www.iprbookshop.ru/27250.html>

6. Pokrovsky V.I., Pak S.G., Briko N.I. Infectious diseases and epidemiology: a textbook. - 3rd ed., Rev. and additional - M.: GEOTAR-Media, 2013. - 1008 p. -  
<http://www.studmedlib.ru/book/ISBN9785970416525.html>

### **additional literature**

1. Brazhnikov A.Yu., Briko N.I., Kiryanova E.V. General epidemiology with the foundations of evidence-based medicine. Guide to practical exercises: textbook / Ed. IN AND. Pokrovsky. - 2nd ed., corrected. and additional - M. : GEOTAR-Media, 2012. - 496 p.  
<http://www.studmedlib.ru/book/ISBN9785970417782.html>

2. Brazhnikov A.Yu., Briko N.I., Kiryanova E.V. General epidemiology with the foundations of evidence-based medicine. Guide / Ed. IN AND. Pokrovsky, N.I. Briko. - M. : GEOTAR-Media, 2010. - 400 p.  
<http://www.studmedlib.ru/book/ISBN9785970413654.html>

### **Regulatory materials**

1. The Constitution of the Russian Federation.
2. Civil Code of the Russian Federation.
3. Criminal Code of the Russian Federation.
4. Federal Law of November 21, 2011 No. 323-FZ "On the fundamentals of protecting the health of citizens of the Russian Federation".
5. Federal Law of March 30, 1999 N 52-FZ "On the sanitary and epidemiological well-being of the population" (as amended)  
<http://files.stroyinf.ru/data1/6/6000/>
6. Federal Law of September 17, 1998 No. 157-FZ "On Immunoprophylaxis of Infectious Diseases".
7. Federal Law of the Russian Federation dated July 27, 2006 No. 152-FZ "On Personal Data".
8. Decree of the Government of the Russian Federation of July 24, 2000 No. 554 "On approval of the regulation on the state sanitary and epidemiological

service of the Russian Federation and the regulation on state sanitary and epidemiological regulation”.

9. Order of the Ministry of Health and Social Development of the Russian Federation dated January 31, 2011 No. 51n “On approval of the National calendar of preventive vaccinations and the calendar of preventive vaccinations according to epidemic indications”.

10. Sanitary rules SP 3.3.2367-08 "Organization of immunoprophylaxis of infectious diseases".

11. Sanitary rules SP 3.3.2342-08 "Ensuring the safety of immunization".

12. Sanitary rules SP 3.3.2.1248-03 "Conditions for the transportation and storage of medical immunobiological preparations".

13. Sanitary rules SP 3.3.2.2329-08 “Change and addition No. 1 to sanitary rules 3.3.2.1248-03 “Conditions for transportation and storage of immunobiological preparations”.

14. Decree of the Government of the Russian Federation of July 15, 1999 No. 825 "On approval of the list of works, the implementation of which is associated with a high risk of contracting infectious diseases and requires mandatory preventive vaccinations."

15. Sanitary rules and norms SanPiN 2.1.3.2630-10 "Sanitary and epidemiological requirements for organizations engaged in medical activities."

16. Sanitary rules and norms SanPiN 2.1.7.2790-10 "Sanitary and epidemiological requirements for the management of medical waste".

17. Sanitary rules SP 1.1.1058-01 "Organization and implementation of production control over compliance with sanitary rules and the implementation of sanitary and anti-epidemic (preventive) measures"

18. Sanitary rules SP 3.5.1378-03 "Sanitary and epidemiological requirements for the organization and implementation of disinfection activities."

19. Sanitary rules SP 3.5.3.1129-02 "Deratization".

20. Sanitary rules and norms SanPiN 3.5.2.1376-03 "Disinfestation".

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

1. Patent database and search <http://www.freepatent.ru/>

2. Internet health portal <http://bio-x.ru/go.mail.ru/search?rf=e.mail.ru&fm=1&us=15&usln=3&usstr=health&usqid=7d41348ea69338f3&hasnavig=1&sbmt=1509229987234&q=health>

3. Site research <https://infopedia.su/4x3e87.html>;  
<https://dic.academic.ru/dic.nsf/ruwiki/663252>

4. SSAU electronic library - <http://library.sgau.ru>

- 5.NEB -<http://elibrary.ru>
- 6..<http://edu.znate.ru/docs/3997/index-94535-6.html>
- 7.<http://med-lib.ru/speclit/patfiz/index.php>
- 8.<http://www.medliter.ru/?page=list&id=09>
- 9.<http://www.rmj.ru/medjurnrus.htm>
- 10.Spravochno-legal system Consultant plus.
- eleven.<http://vladmedicina.ru>Medical portal of Primorsky Krai
- 12.<http://www.rosminzdrav.ru>Official website of the Ministry of Health of the Russian Federation
- 13.<http://meduniver.com>Medical site about various fields of medicine
- 14.student library<http://www.studmedlib.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**

The theoretical part of the discipline "Current issues of epidemiology" is revealed in lectures, since the lecture is the main form of education, where the teacher gives the basic concepts of the discipline.

The sequence of presenting the material in lectures is aimed at forming an indicative basis for students to subsequently master the material during independent work.

Practical classes of the course are held in all sections of the curriculum. Practical work is aimed at developing students' 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. To prepare for the exam, a list of questions is presented in Appendix 2.

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

The educational process in the discipline is carried out in FEFU lecture, computer classes, equipped with computers and multimedia systems, with a connection to the FEFU corporate network and the Internet /

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	Multimedia Audience: Motorized Screen 236*147cm Trim Screen Line; Projector DLP, 3000 ANSI Lm, WXGA 1280x800, 2000:1 EW330U Mitsubishi;

village, 10, School of Biomedicine, room M 419, area 74.9 m <sup>2</sup>	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
	PC-1 Ability to calculate, evaluate and analyze indicators characterizing the activities of a medical organization, and indicators characterizing the state of public health	PC-1.1 Knows the principles of collecting and processing information PC-1.2 Can create a data matrix, code the material PC-1.3 Owns statistical methods of data processing, including using information and analytical systems and the information and telecommunication network "Internet"

Task type	Code and name of professional competence (result of development)	Code and name of the indicator of achievement of competence
	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

Code and wording of competence	Stages of competence formation
PC-1.1 Knows the principles of collecting and processing information	Knows the principles of collecting, processing, analyzing and providing information Able to collect, process, analyze and provide information in their professional activities Possesses the skill of collecting, processing, analyzing and providing information in their professional activities
PC-1.2 Can create a data matrix, code the material	Knows how to encode information Able to create a data matrix, conduct material coding Proficient in coding material
PC-1.3 Owns statistical methods of data processing, including using information and analytical systems and the information and telecommunication network "Internet"	Knows the basic methods of data processing, including using information and analytical systems and the information and telecommunications network "Internet" Ability to process and present data Owns statistical methods of data processing, including using information and analytical systems and information and telecommunications network "Internet"
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
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### TO 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 General epidemiology	PC-1.1; PC-1.2; PC-1.3; PC-4.1; PC-4.2; PC-4.3	<p><b>Knows:</b></p> <ul style="list-style-type: none"> <li>• subject areas of epidemiology;</li> <li>• the basics of organizing and conducting epidemiological studies (descriptive-evaluative, analytical, experimental), their purpose and features of organization, sources of errors in epidemiological studies and ways to eliminate them. Legal and ethical aspects of epidemiological research;</li> </ul> <p><b>Can:</b></p> <ul style="list-style-type: none"> <li>• organize epidemiological studies;</li> <li>• conduct a retrospective assessment of the intensity, dynamics, structure, territorial distribution of morbidity (mortality, disability) in order to identify priority areas for preventive and anti-epidemic activities of medicine, the formation of hypotheses about risk factors;</li> </ul> <p><b>Owned by:</b></p> <ul style="list-style-type: none"> <li>• descriptive-evaluative and analytical methods of epidemiological diagnostics;</li> <li>• the ability to identify, based on the results of operational analysis, the prerequisites and precursors of complications of the epidemic situation</li> </ul>	Interview UO-1, Abstract PR-4, tests PR-1	Exam Questions 1-20

2	Section 2 Private epidemiology	PC-1.1; PC-1.2; PC-1.3; PC-4.1; PC-4.2; PC-4.3	<p><b>Knows:</b></p> <ul style="list-style-type: none"> <li>• features of the epidemiology of the most important infectious, parasitic and non-communicable diseases and measures to combat them;</li> <li>• theoretical, methodological and organizational foundations of epidemiological surveillance of individual groups and nosological forms of infectious, parasitic and non-infectious diseases;</li> </ul> <p><b>Can:</b></p> <ul style="list-style-type: none"> <li>• collect, statistically and logically process information in order to assess the state of health and morbidity of the population and the factors that determine them;</li> <li>• conduct a survey of epidemic foci and epidemically significant objects;</li> <li>• to carry out epidemiological surveillance and control over certain groups and nosological forms of infectious, parasitic and non-infectious diseases;</li> <li>• organize preventive and anti-epidemic measures and evaluate their quality and effectiveness;</li> <li>• conduct a sanitary and epidemiological survey of facilities for compliance with the requirements of sanitary legislation;</li> </ul> <p><b>Owned by:</b></p> <ul style="list-style-type: none"> <li>• the ability to formulate and evaluate hypotheses about the cause-and-effect relationships of morbidity with risk factors;</li> <li>• the ability to organize preventive and anti-</li> </ul>	Interview UO-1, Abstract PR-4, tests PR-1	Exam Questions 21-40
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			epidemic measures based on the results of epidemiological diagnostics		
3	Section 3 Epidemiology of noncommunicable diseases	PC-1.1; PC-1.2; PC-1.3; PC-4.1; PC-4.2; PC-4.3	<p><b>Knows:</b></p> <ul style="list-style-type: none"> <li>principles of organizing preventive and anti-epidemic measures based on evidence-based medicine;</li> <li>regulatory framework for activities;</li> </ul> <p><b>Can:</b></p> <ul style="list-style-type: none"> <li>evaluate the formulated hypotheses based on the principles of evidence-based medicine;</li> <li>conduct a prompt assessment of the epidemiological situation and the epidemic situation;</li> </ul> <p><b>Owned by:</b></p> <ul style="list-style-type: none"> <li>the ability to use databases to find evidence of the validity of decisions made</li> </ul>	Interview UO-1, Abstract PR-4, tests PR-1	Exam Questions 41-60

**Competence level assessment scale  
in the discipline "Current issues of epidemiology"**

Code and wording of competence	Stages of competence formation		criteria	indicators	points
PC-1 The ability to calculate, evaluate and analyze indicators characterizing the activities of a medical organization, and indicators characterizing the state of health of the population	Knows	principles for organizing applied and practical projects and other activities for the study and modeling of social, economic, epidemiological and other conditions that affect the health and quality of life of the population	knows modern organizations of applied and practical projects and other activities for the study and modeling	knowledge and use in practical work of the principles of organizing applied and practical projects to study social, economic and anti-epidemic conditions that affect public health	65-71
	Can	carry out applied and practical projects and other activities to study and model social, economic, epidemiological and	apply applied and practical projects and other activities to study the conditions that	apply in practice practical projects and other activities to study the conditions that affect the health	71-84

		other conditions that affect the health and quality of life of the population	affect the health and quality of life of the population	and quality of life of the population	
	owns	skills in organizing applied and practical projects and other activities to study and model social, economic, epidemiological and other conditions that affect the health and quality of life of the population	is able to organize practical projects to identify conditions that affect the health status and quality of life of the population	owns the principles of organizing applied and practical projects and other activities to study the conditions and risk factors that affect the health and quality of life of the population	85-100
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, justify the volume of medical care in accordance with the resources of a medical organization and	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 accordance with the resources of a medical organization and the needs of the population	71-84

			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

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

*Current assessment of students.* Current certification of students in the discipline "Current issues of epidemiology» is carried out in accordance with the local regulations of the Far Eastern Federal University and is mandatory.

Current certification in the discipline "Current issues of epidemiology» is carried out in the form of control measures (a written survey, defense of practical/laboratory work) to assess the actual results of masters' training is carried out 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* students in the discipline "Current issues of epidemiology" is conducted in accordance with the local regulations of FEFU in the form of an exam.

. 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 "Current issues of epidemiology" is carried out in the form of a test in the form of a written answer.

**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. The subject and methods of epidemiology, its relationship with other disciplines.
2. The role of epidemiology for medical science and public health. The concept of the epidemiology of non-communicable diseases.
3. History of the development of epidemiology. The significance of the works of D.K. Zabolotny, N.F. Gamaleya, L.V. Gromashevsky, E.N. Pavlovsky, V.A. Bashenina, I.I. Mechnikov.
4. The place of epidemiology in the structure of medical disciplines.
5. Definition and structure of the epidemiological research method.
6. Descriptive-evaluative epidemiological methods /descriptive epidemiology/.
7. Analytical epidemiological methods /analytical epidemiology/.
8. Experimental epidemiological methods.
9. Method of mathematical modeling. quantitative epidemiology.
10. The doctrine of the epidemic process. Definition of the concept, intensity of the epidemic process.
11. Brief description of the three links of the epidemic process and their relationship.
12. Definition of the term "source of infection". Sources of infection in anthroponoses, zoonoses, sapronoses.
13. Mechanism of transmission of infection. transmission factors.

Pathways for the spread of an infectious agent.

14. Principles of classification of infectious diseases. Evolutionary bases of classification L.V. Gromashevsky (special position of zoonoses in addition to Gromashevsky's classification).

15. The role of social and natural factors in the development of the epidemic process. The doctrine of the natural foci of infectious diseases (E.N. Pavlovsky).

16. Epidemic process, its structure, forms of manifestation.

17. Sources of infection; options for various diseases. Conditions that determine their epidemiological significance.

18. Mechanism of transmission of infection. Definitions, options, the concept of the ways and factors of transmission.

19. The susceptibility of the population. Immunity and nonspecific resistance.

20. Influence of the social and natural environment on the development of the epidemic process.

21. Orientation and organization of anti-epidemic work in the epidemic focus.

22. International System for the Prevention of the Importation of Infectious Diseases.

23. Organization of sanitary protection of the territory of the country.

24. Organization of anti-epidemic measures in emergency situations.

25. Structure and organization of work of the State centers of sanitary and epidemiological surveillance. Sanepid documentation.

26. Modern ideas about disinfection. Types of disinfection and its role in the system of anti-epidemic measures.

27. Chemical disinfectants. Characteristics and methods of their application.

28. Mechanical and physical means of disinfection. Their characteristics, methods of application.

29. Disinsection. Fixed assets and their application.

30. Deratization, its methods and means.

31. Susceptibility to infectious diseases. Types of immunity and its influence on the development of the epidemic process.

32. Basic provisions and requirements for the organization and conduct of preventive vaccinations.

33. Characteristics of biological preparations belonging to the group of vaccines, toxoids.

34. Characteristics of drugs belonging to the group of sera, immunoglobulins, bacteriophages.

35. The role and importance of immunoprophylaxis. The contribution of domestic scientists to the development of vaccination.
36. Current state and prospects of vaccination.
37. Indications for vaccination.
38. Childhood vaccination schedule.
39. Anthroponotic intestinal infections.
40. Comparative characteristics of the epidemic process in acute intestinal infections, depending on the pathways of transmission of the pathogen.
41. Preventive and anti-epidemic measures for acute intestinal infections.
42. Features of the epidemic process in aerosol infections with exanthema syndrome /measles, rubella, chicken pox/. Anti-epidemic measures.
43. Acute respiratory viral infections, features of the epidemic process in various nosological forms. The content of preventive measures to prevent influenza.
44. Epidemiological characteristics of the group of airborne infections.
45. Epidemiological characteristics of the group of intestinal infections.
46. Organization and implementation of anti-epidemic measures in the foci of airborne infections.
47. Organization and implementation of anti-epidemic measures in the foci of intestinal infections.
48. The concept of the natural focus of an infectious disease. Reservoirs of pathogens.
49. Carriers of pathogens of natural focal diseases. mechanism of human infection.
50. Typhus. Main clinical manifestations, epidemiology. Diagnostic methods, anti-epidemic measures.
51. Sanitary protection of the territory, quarantine measures, their importance in protecting the state from infectious diseases.
52. Basic concepts of hospital epidemiology. Definition of the term "nosocomial infections" (HAI).
53. Epidemic process in various traditional nosocomial infections: sources, factors and routes of infection in acute intestinal, airborne infections, viral hepatitis and HIV infection.
54. Etiology of nosocomial infections, "hospital" strains of pathogens.
55. Possible sources of infection in nosocomial infections.
56. Ways and factors of transmission of infection in nosocomial infections.
57. Groups at increased risk of nosocomial infections. Fundamentals of epidemiological surveillance of nosocomial infections.
58. The concept of the anti-epidemic regime of the hospital.

59. Preventive and anti-epidemic measures for the prevention of nosocomial infections.

60. Diagnosis and prevention of hospital (nosocomial) infections in medical institutions.

**Criteria for grading a student on an exam  
by discipline " Current issues of epidemiology»**

Exam grade	Requirements for the formed competencies
"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**

**Typical tasks for practical exercises:**

**Type 1. Answer the theoretical questions:**

1. Define the terms "outbreak", "epidemic", "pandemic".
2. What is sporadic, epidemic, endemic and exotic incidence?
3. List the mechanisms of transmission of infectious diseases.
4. What factors influence the epidemic process?
5. What are the principles of organizing preventive and anti-epidemic measures?

**Type 2. Solve situational problems:**

**Task 1**

Patient K., 35 years old, hospitalized in the infectious department, was diagnosed with viral hepatitis A. 2 weeks after hospitalization, a child addressed the local pediatrician with complaints of headache, fever. Diagnosed with acute respiratory disease. After 3 days, the child developed icterus of the sclera, urine darkened. Viral hepatitis was diagnosed.

During the epidemiological investigation of the case of the disease, it was established that observation of contacts, their laboratory examination, and sanitary and educational work in the outbreak were not carried out; the local therapist and pediatrician were not informed about the presence of a focus of viral hepatitis.

What activities should have been carried out at home in the outbreak in connection with the registration of the first case of viral hepatitis A?

### **Task 2**

A victim of a bite by a domestic dog turned to the trauma center. He has a full course of immunization against tetanus, the last vaccination was 6 years ago.

What infectious diseases should be prevented? What activities should be carried out for this purpose?

### **Task 3**

An outbreak of Sonne shigellosis has been registered in a kindergarten. The disease is associated with the consumption of sour cream.

Name the possible source of infection and the factors of transmission of the pathogen.

### **Evaluation criteria (written / oral report, abstract, communication, essay, including those made in the form of presentations)**

The grade "excellent" is 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. There are no actual errors related to understanding the problem; graphic work is framed correctly

Evaluation "good" - 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. One or two mistakes were made in the design of the work.



Grade "satisfactory" - 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 mistakes were made in the sense or content of the problem, the design of the work

Grade "unsatisfactory" - 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, in the design of the work.

### **Evaluation tools for current certification**

**Control tests** are intended for students studying the course "Legal Issues in Medicine".

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. The student must indicate all the correct answers.

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

### **Sample test tasks**

#### **1. EPIDEMIOLOGY IS A SCIENCE STUDYING:**

- 1) infectious diseases
- 2) pathogens of infectious diseases
- 3) patterns of the epidemic process
- 4) infectious process

#### **2. MANIFESTATION OF THE EPIDEMIC PROCESS IS:**

- 1) acute disease
- 2) a disease in a chronic form
- 3) sporadic and epidemic incidence
- 4) severe form of the disease

#### **3. THE TERM "SPORADIC INCIDENCE" MEANS DISEASES:**

- 1) single
- 2) group
- 3) Bulk
- 4) characteristic of the area

**4. EXOTIC INFECTIONS ARE INFECTIOUS:**

- 1) diseases unusual for the area
- 2) diseases peculiar to the area
- 3) viral diseases spread by arthropods
- 4) mass diseases

**5. THE FIRST LINK OF THE EPIDEMIC PROCESS:**

- 1) susceptible organism
- 2) transmission mechanism
- 3) source of infection
- 4) transmission path

**6. SOURCE OF INFECTION CAN BE:**

- 1) patients and bacteria carriers
- 2) food
- 3) water
- 4) insects

**7. THE SOURCE OF THE INFECTION GENERATOR IS:**

- 1) any objects on which the pathogen is found
- 2) live infected human or animal organism
- 3) any environment in which the pathogen persists for a long time
- 4) carriers

**8. GREAT DANGER AS A SOURCE OF INFECTION IS:**

- 1) patients with a severe course of the disease
- 2) patients with a mild course of the disease, chronic bacteria carriers
- 3) transient bacteria carriers
- 4) patients with exotic diseases

**9. THE MOST EPIDEMIOLOGICAL DANGER IS PRESENTED BY PATIENTS WITH FORMS OF THE DISEASE:**

- 1) mild atypical
- 2) heavy
- 3) manifest
- 4) typical

**10. THE MOST DANGEROUS SOURCE OF INFECTION IS:**

- 1) a sick person
- 2) bacteria carrier
- 3) healthy person

4) convalescent

### **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 mastering knowledge in the discipline, a test result of at least 61 points is allowed.