

**FEDERAL STATE BUDGETARY EDUCATIONAL INSTITUTION OF
HIGHER EDUCATION
"AMUR STATE MEDICAL ACADEMY"
MINISTRY OF HEALTH OF THE RUSSIAN FEDERATION**

AGREED

Vice Rector for Academic Affairs,

 N.V. Loskutova

April 17, 2025

Decision of the CCMC

April 17, 2025

Protocol No. 7

APPROVED

by decision of the Academic Council of the FSBEI HE
Amur SMA of the Ministry of Health of the Russian
Federation

April 22, 2025

Protocol No. 15

Acting Rector of the FSBEI HE Amur SMA of the
Ministry of Health of the Russian Federation

 I.V. Zhukovets

April 22, 2025



EDUCATIONAL PROGRAM

discipline "EPIDEMIOLOGY"

Specialty: 31.05.01. General Medicine

Course: 5

Semester: 9

Total hours: 108 hrs.

Total credits: 3 credit units

Control form: credit-test, 9 semester

Blagoveshchensk, 2025

The educational program of the discipline is designed in accordance with the requirements of the Federal State Educational Standard of Higher Education - Specialist in specialty 31.05.01. General Medicine, approved by the order of the Ministry of Education and Science of Russia dated 08.12.2020 No. 988 (registered in the Ministry of Justice of Russia on 08.26.2020 No. 59493), BPEP HE (2021).

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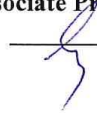
Protocol No. 15 dated April 15, 2025

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Conclusion of the Expert Commission on the review of the Educational Programs:

Protocol No. 1 dated April 16, 2025

Expert of the expert commission,

Holder of an Advanced Doctorate in Medical Sciences, Associate Professor
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Protocol No. 6 dated April 17, 2025

Chairman of the Central Medical Council No. 3

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April 17, 2025

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I. EXPLANATORY NOTE

1.1 Brief description of the discipline

The work program on epidemiology prepared by the department staff provides for the training of graduates who have mastered the basics of epidemiological diagnostics to identify the causes, conditions and mechanism of the formation of infectious and non-infectious diseases among the population, the validity of the organization and implementation of a system of preventive and anti-epidemic measures,

aimed at improving the health of the adult population, reducing infectious diseases within the functional responsibilities assigned to the medical service.

1.2. Purpose and objectives of the discipline.

PURPOSE OF TEACHING THE DISCIPLINE: - deepening basic and developing systemic knowledge, skills and abilities on issues of general and specific epidemiology, the epidemiological approach to studying morbidity among the population, the basics of immunoprophylaxis and the organization of preventive and anti-epidemic measures at the medical site and in emergency situations, developing universal, general professional and professional competencies necessary in the future professional activity of a general practitioner.

LEARNING OBJECTIVES OF THE DISCIPLINE:

1. To provide knowledge of the organization and levels of the epidemiological surveillance system in the Russian Federation, the methodological foundations of organizing, planning and implementing anti-epidemic measures in emergency situations among the civilian population.
2. Consolidation and improvement of skills in organizing sanitary-hygienic and anti-epidemic regimes in medical organizations providing primary health care and inpatient care.
3. To teach how to use the methodology for organizing preventive and anti-epidemic measures in epidemic foci for various infectious diseases.
4. To teach the basics of organizational work on planning immunoprophylaxis of infectious diseases (according to the National Vaccination Calendar and according to epidemic indications).
5. Formation of independent epidemiological thinking (ability to analyze morbidity rates of different age groups of the population according to nosological forms of diseases based on general patterns of development of the epidemiological process).
6. Consolidation and improvement of skills in organizing disinfection measures to disrupt the mechanisms and routes of transmission of infectious diseases in medical organizations.
7. Deepening skills in the preparation of medical documentation, working with educational scientific, reference, medical literature, sanitary rules and regulations, official statistical reviews, including those on the Internet.

1.3. The place of the discipline in the structure of the main professional educational program of higher education

According to the OPOPVO, the discipline "Epidemiology" refers to the disciplines of the basic part (Block 1). The total workload is 3 credits (108 hours).

The discipline contains the following sections:

1. General epidemiology
2. Private epidemiology

1.4. Requirements for students

To study the discipline, knowledge, skills and abilities formed by previous disciplines are necessary:
Philosophy
Knowledge: Methods and techniques of philosophical analysis of problems, forms and methods of scientific knowledge, their evolution. The concept of cause and causality of diseases. Principles of conducting discussions.
Skills: Be able to use historical-philosophical and system-analytical methods in studying the general laws of epidemiology. Analyze situations of professional activity and other spheres of life using philosophical categories and concepts.
Skills: Applies skills of analysis, synthesis and scientific thinking in educational and research work, presentation of an independent point of view, logical thinking, public speaking, conducting discussions and round tables.
Biology
Knowledge: The phenomenon of parasitism, morphology, life cycles, pathogenic effect on humans, relationships in the parasite-host system at the population level, distribution of parasites in nature.
Skills: Be able to analyze the role of biological factors in the development of disease. Analyze patterns of variability in the development of relationships between macro and microorganisms. Determine life cycles of epidemically significant parasites and helminths.
Skills: Uses laboratory equipment, techniques for preparing temporary microscopic preparations, and skills in identifying human parasites on micro and macroscopic preparations.
Microbiology, virology, immunology
Knowledge: Classification of microorganisms and their role in the development of infectious diseases, the immune system, structure and functions, innate and acquired immunity, mechanisms and types of immune response to the introduction of vaccines, biopreparations (vaccines, serums, bacteriophages), methods of production and practical significance.
Skills: Be able to perform seeding, recording and interpreting the results of laboratory diagnostic methods (microbiological, molecular biological and immunological)
Skills: Applies methods of disinfection, sterilization and antiseptic treatment of instruments and equipment to avoid infection of the doctor and patient, skills in working with material containing pathogenic microorganisms, evaluates the results of microbiological, molecular biological and immunological methods for studying biological fluids.
Hygiene
Knowledge: The impact of the environment on public health. Health indicators of the adult population, factors of their formation (ecological, natural and climatic, social, genetic, epidemiological). Diseases associated with the impact of unfavorable climatic and social factors. Legislative acts and normative legal documents governing sanitary and epidemiological services for the population in infectious and parasitic diseases.
Skills: Be able to plan, analyze and evaluate the quality of medical care for the adult population, as well as establish cause-and-effect relationships between changes in health status and the impact of environmental factors.
Skills: applies skills in organizing and providing anti-epidemic assistance to the population, taking into account the social, professional, age and gender structure, skills in teaching patients and their relatives basic hygienic measures of a health-improving nature.
Public health and healthcare organization
Knowledge: Basic principles of organizing a health care system. Methods of collecting and medical-statistical analysis of health indicators of the adult population, basic intensive and extensive indicators (morbidity, mortality, lethality).
Skills: Be able to assess the level and structure of morbidity in the adult population, maintain ac-

The knowledge and skills acquired in the discipline "Epidemiology" are necessary for studying subsequent disciplines

[illegible]

1.6. Requirements for the results of mastering the discipline

The study of the discipline "Epidemiology" is aimed at the formation of the following competencies: universal (UK) , general professional (OPK) and professional competencies (PC) : UK-1, OPK-2, 4.6, PC-9.11

No. p/p	Code and name of competence	Code and name of the indicator of achievement of competence	As a result of studying the academic discipline "Epidemiology" The student must:		
			Know	Be able to	To own
Universal competencies					
1	UC -1. Capable of carrying out a critical analysis of problematic situations based on a systems approach and developing an action strategy	AI UC-1.1. Analyzes the problem as a system, identifying its components and the connections between them.	- the main historical stages of the development of epidemiology, the subject, goals and objectives of epidemiology. - basic concepts in epidemiology, patterns of the epidemic process. - epidemiology as a general medical science, goals and objectives of epidemiology at the current stage of development of society. - epidemic focus, links of the epidemic process. - epidemiological classification of infectious diseases.	- to substantiate the causes, conditions of occurrence, mechanisms of development and manifestations of the epidemic process. - to determine the links of the epidemic process. - to determine the quantitative and qualitative manifestations of the epidemic process. - use the laws of epidemiology to establish the causality of diseases.	- the ability to analyze the significance of epidemiology at the current stage of science and practice. - the ability to formulate and evaluate hypotheses about the cause-and-effect relationships between morbidity and risk factors. - the ability to determine the links in the epidemic process, - the ability to analyze the forms of manifestation of the epidemic process.
General professional competencies					
2.	GPC -2. Capable to conduct and monitor the effectiveness of measures for prevention, the for-	AI GPC - 2.3. Develops a work plan to promote a healthy lifestyle for various groups (staff and patients of medical organizations, various professional and social groups), taking in-	- structure, causes, characteristics of epidemic foci, factors, risk groups for the occurrence of HAI; - principles of preventive and anti-epidemic measures in HAI foci;	- maintain a system of sanitary and anti- epidemic regime in the hospital and at the medical site; - use in daily activities and instructional and methodological documents regulat-	- methods for collecting epidemiological anamnesis, conducting anti-epidemic measures in outbreak areas; - methods and techniques for organizing and imple-

	mation of a healthy lifestyle and sanitary and hygienic education of the population	to account the sanitary and epidemiological situation.	- the basics of organizing the protection of patients and medical personnel from HAI; - organizing the work of the infectious diseases department of the clinic; - functions of a general practitioner to promote a healthy lifestyle and prevent infectious diseases in the medical area; - the structure and organizational basis of anti-epidemic institutions of Rospotrebnadzor; - methods of conducting health education work among the adult population.	- ing preventive and anti-epidemic work; - carry out preventive measures to prevent infectious diseases; - carry out health education work.	- menting a disinfection regime in the Ministry of Defense; - an algorithm for behavior in an emergency situation; - techniques for conducting primary anti-epidemic measures in case of detection of HAI; - methods of organizing primary prevention of infectious diseases; - the ability to determine the epidemiological group of diseases based on clinical and epidemiological data.
3	GPC -4. Capable of using medical devices provided for by the procedure for providing medical care, as well as conducting patient examinations to establish a diagnosis	AI GPC -4.1. Uses modern medical technologies, specialized equipment and medical products, disinfectants, drugs, including immunobiological and other substances and their combinations when solving professional problems from the standpoint of evidence-based medicine.	- modern means used for disinfection, Disinsection, Deratization; - types, methods of disinfection, Disinsection, Deratization; - methods of quality control of disinfection and sterilization ; - modern means and methods for treating patients with pediculosis in hospital ; - national calendar of preventive vaccinations, planned and according to epidemiological indications; - modern vaccines, serums, im-	- justify the choice of modern disinfectants, antiseptics, drugs, including immunobiological ones, and other substances and their combinations when solving professional problems from the standpoint of evidence-based medicine of an epidemiological nature; - organize, justify and evaluate the quality and effectiveness of disinfection, disinfestation and Deratization measures at various sites	- an algorithm for the application and evaluation of the results of using medical technologies, specialized equipment and medical products in solving professional problems; - methods and techniques for organizing and implementing a disinfection regime in a hospital and at a medical site; - methods for preparing disinfection solutions and assessing the quality of

			munoglobulins, bacteriophages, eubiotics ; - requirements for the quality of vaccines, storage, and transportation of IBP ; - analytical, experimental methods of epidemiological research ; - randomized clinical trial of drugs, including IMBP ; - criteria for assessing the clinical, immunological and epidemiological effectiveness of immunoprophylaxis.	and foci of infectious diseases; - organize and evaluate the quality of current and final disinfection; - to evaluate the quality, epidemiological and immunological effectiveness of modern immunobiological drugs using epidemiological research methods.	disinfection measures; - algorithm of epidemiological research methods.
4.	GPC -6. Capable of organizing patient care, providing primary health care, ensuring the organization of work and making professional decisions in emergency situations at the pre-hospital stage, in emergency situations, epidemics and in areas of mass destruction	AI GPC -6.2. Uses medical means of protection, prevention, provision of medical care and treatment of injuries caused by toxic substances of various nature, radioactive substances and biological agents. AI GPC - 6.3. Makes professional decisions in emergency situations and provides first medical aid at the pre-hospital stage, in emergency situations, epidemics and in areas of mass destruction. AI GPC -6.4.	- types, means, damaging factors of biological weapons ; - Russian legislation in the field of biosafety; - measures to protect against biological weapons (collective, individual); - features of the epidemic situation and epidemic foci during emergencies; - emergency and specific prevention in epidemic foci; - medical and evacuation support for patients in emergency situations, medical triage, transportation of patients; - principles of anti-epidemic measures in foci of diseases causing emergency situations in	- use individual and collective means of protection in case of biological contamination; - work in epidemic foci of emergency situations, put on and take off anti-plague suit; - reorganize the work of the medical evacuation stage into a strict anti- epidemic regime; - assess the epidemiological situation during emergencies; - carry out medical triage of sick and injured people; - to properly organize anti-epidemic measures upon admission of patients with	personal protective equipment ; - the ability to carry out emergency and specific prevention; - methods for evacuation and medical triage of infectious patients; - an algorithm for organizing anti-epidemic (isolation-restrictive, disinfection) and preventive measures in the event of outbreaks of particularly dangerous infections, in the event of epidemics and in emergency situations; - the ability to work in a strict anti-epidemic regime

		Organizes the work of medical personnel and carries out anti-epidemic measures to protect the population in emergency situations, epidemics and in areas of mass destruction.	the field of sanitary and epidemiological well-being of the population and "emergencies"; - the basics of organizing the protection of patients and medical personnel in the event of diseases that cause emergency situations in the field of sanitary and epidemiological well-being of the population and "emergencies"; - legislation in the field of sanitary and epidemiological welfare of the population. - anti-epidemic regime of work of the MO; - structure and organizational basis of anti-epidemic institutions of Rospotrebnadzor.	diseases that cause emergency situations in the area of sanitary and epidemiological well-being of the population.	in the event of diseases that cause emergency situations in the area of sanitary and epidemiological well-being of the population; - skills in working with personal protective equipment.
Professional competencies					
5.	PC-9. Ready to conduct events on prevention and formation healthy lifestyle and sanitary and hygienic enlightenment population	AI PC-9.1. Determine medical indications for the introduction of restrictive measures (quarantine) AI PC-9.2. Determine medical indications for referral to a specialist physician AI PC-9.3. Conduct sanitary anti-epidemic measures in the	-content of preventive and anti-epidemic work in a medical area; - modern means and methods of disinfection, sterilization, Disinsection, Deratization; -immunobiological preparations - methods of early detection infectious patients; - a system of isolation and registration of patients; -epidemiological indications for	-develop a plan preventive and anti-epidemic measures among the population, patients and medical staff; - determine the boundaries of the outbreak; - identify epidemiological indications for patient hospitalization, discharge criteria and medical examination;	- skills in collecting epidemiological anamnesis; -skills of conducting epidemiological survey of the outbreak of infectious disease with filling accounting and reporting documentation; -composition skills plan for anti-epidemic work at the medical site.

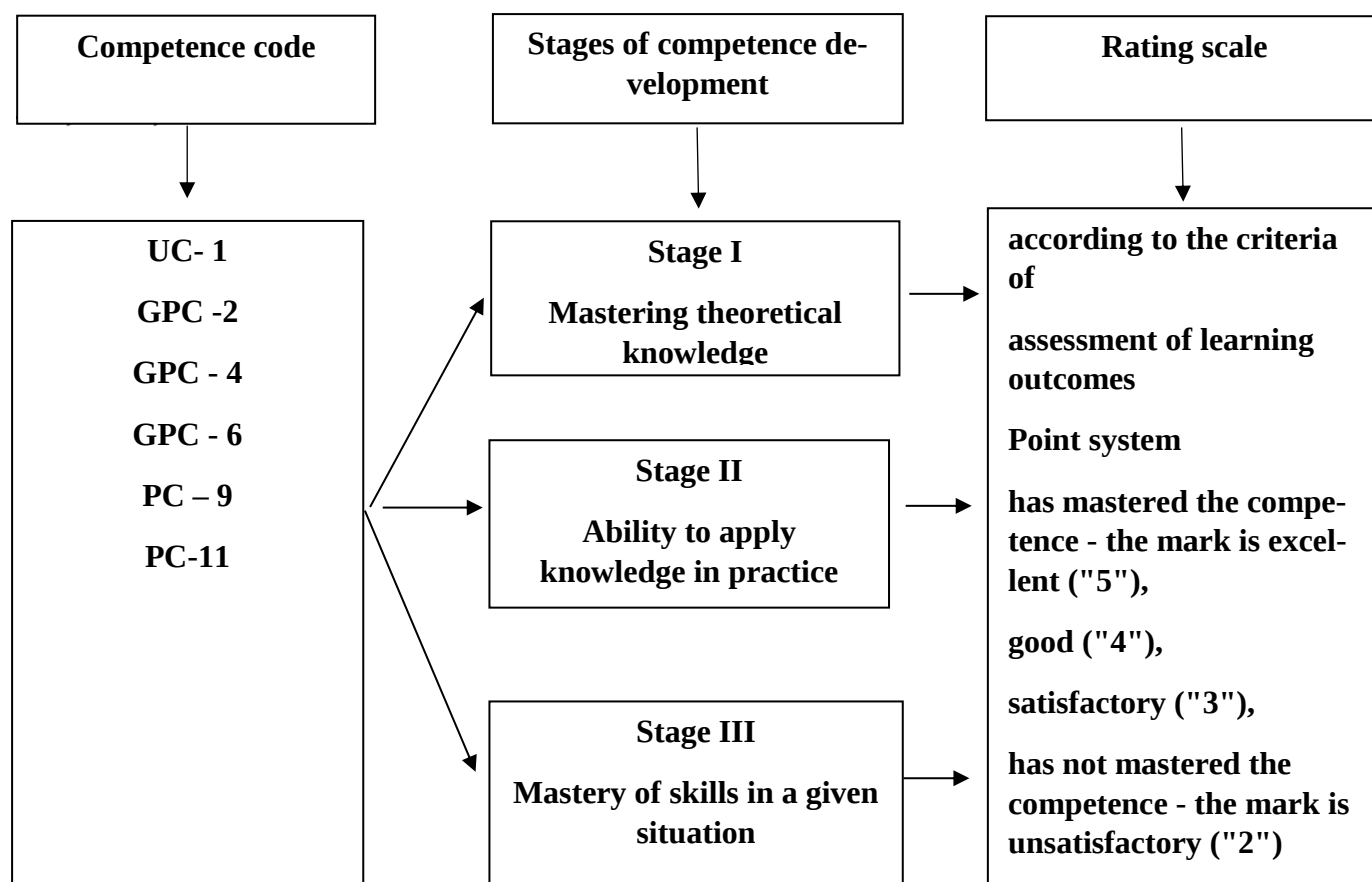
		event of an outbreak of infection	hospitalization; - infectious diseases department; - forms and methods of sanitary – educational work in foci.	- identify groups, time, risk areas by morbidity; - organize disinfection measures, immunoprophylaxis and evaluate quality and efficiency; - conduct an epidemiological survey foci with single and group cases of diseases; - fill out the registration form-reporting documentation (f-357-u, f-058-u).	
6.	PC-11. Ability to lead medical documentation and quality control implementation her conduct	AI PC-11.1. Fill out medical documentation, including in the form of an electronic document, control quality her management AI PC-11.2. Use V work personal data of patients and information constituting a medical secret	- regulatory and legal acts, regulating preventive and anti-epidemic activities doctor - therapist V medical organizations. - regulatory and legal documentation on issues of immunoprophylaxis population. - design rules and requirements to medical management documentation V medical organizations.	- use in everyday activities regulatory and legal documents regulating preventive and anti-epidemic activity. - carry out filling medical documentation (f-058u emergency notification of infectious disease, food poisoning, acute occupational poisoning; f-357u-epidemiological survey cards hearth).	- skills of working with regulatory documents governing preventive and anti-epidemic activities physician - therapist in medical organizations. - skills of correct fillings medical documentation on immunoprophylaxis of infectious diseases; - technology fillings Epidemiological survey cards "focus of infectious disease" accounting form No. 357-u, "Cards emergency noti-

					fications about infectious disease, food, sharp professional poisoning, unusual reactions on "vaccination" accounting form №058-y And "Magazine "Registration of infectious diseases" accounting form №060-y.

Sections of the discipline and the code of the competence being formed

Item No.	Section name	Code of the competence being formed
1.	General Epidemiology	UC-1; GPC-2; GPC -4; GPC -6; PC – 9; PC-11
2.	Private epidemiology	UC - 1; GPC -2; GPC -4; GPC -6; PC -9; PC-11

1.7. Stages of formation of competencies and description of their assessment scales



The first stage is knowledge of topics (at each lesson, the student must know is presented in the form of questions), sections (questions for the final lesson), and discipline (questions submitted for midterm assessment).

The second stage is skills in practical manipulations based on knowledge (is presented in the form - the student must be able to).

The third stage is mastering the skills of application in a specific clinical situation (solving a clinical situation (problem), with a demonstration of practical implementation).

To assess the mastery of competencies, a binary competency assessment scale is adopted: satisfactory – mastered the competency (marked as passed), unsatisfactory – did not master the competency (marked as failed).

1.8. Forms of training organization and types of control

Form of organization of students' training	Brief characteristic
Lectures	Lecture material contains the most important and modern aspects of general and specific epidemiology , the most significant V preparation specialist .
Practical classes	Intended For analysis (consolidation) of theoretical provisions And control over their assimilation With subsequent application received knowledge V in the course study of the topic.
Interactive forms of education	– solution situational tasks followed by discussion in groups; – round table , brainstorming, small group method, role-playing and business game; – creative tasks; – testing in the Moodle system .
Participation in the research work of the department, student circle and conferences	Preparation oral messages and poster presentations for speeches at a student club or scientific conference; and abstracts on the chosen scientific direction; preparation of a literary review using educational, scientific, reference literature and Internet sources ; conducting talks and lectures in city schools on preventive topics.
Types of control	Brief description
Incoming inspection	Conducted before the first lesson. It is designed to assess the level of knowledge of students obtained in mastering previous disciplines and includes testing in the Moodle system.
Current control	-initial and final control- is carried out at each practical lesson and includes an assessment of the theoretical knowledge and practical skills developed by students during the lesson and includes: - assessment of the assimilation of theoretical material (oral frontal survey); - checking the solution of situational problems; - protection of the map of the epidemiological survey of the outbreak; - control of acquisition of practical skills; - checking assignments and exercises completed independently; - individual assignments (practical and theoretical) for each topic of the discipline studied. - testing in the Moodle system
Intermediate certification	Includes a test in the IX semester and consists of an assessment of the theoretical knowledge and practical skills developed by students during the course of the course. – assessment of knowledge of theoretical material (oral survey and interview); – testing in the Moodle system (interim assessment test); – check of assimilation practical skills And skills ; – solving situational problems for each topic of the discipline studied.

II. STRUCTURE AND CONTENT OF THE DISCIPLINE

2.1. Scope of the discipline and types of educational activities

Types of educational work	Total hours	Semesters
		9
Lectures	20	20
Practical classes	52	52
Independent work of students	36	36
Total labor intensity in hours	108	108
Total workload in credit units	3	3

2.2. Thematic plan of lectures and their content

Item No.	Lecture topics and their summary	Codes of formed competencies	Labor intensity (hour)
1.	The subject of epidemiology. The study of the epidemic process. Epidemiological approach to the study of human pathology. The main stages of development of the theory and practice of epidemiology. The structure, goals and objectives of modern epidemiology. Epidemiological classification of infectious diseases. Reservoir and source of the infectious agent. The concept of anthroponoses, zoonoses and Sapronoses. Scheme of development of the epidemic process. Manifestations of the epidemic process. Endemic diseases of the Amur region. Laws of epidemiology. The concept of causality in epidemiology. The relationship of epidemiology with other sciences.	UC - 1	2
2.	Mechanisms and routes of transmission. Disinfection work. Types of transmission mechanism, routes and factors of transmission of infectious agents. Definition the concept of "disinfection". Role, place of disinfection activities in system anti-epidemic events. Types disinfection. Preventive And focal (current And final). Methods disinfection. Groups of chemical compounds and their purpose at carrying out disinfection at different infectious diseases. Deratization. Disinsection.	GPC - 2 GPC - 4 PC - 9 PC - 11	2
3.	General issues of organizing immunoprophylaxis. Methods And methods increases non-specific factors protection. Place immunoprophylaxis V system preventive And anti-epidemic events, her value at different groups infectious diseases. Achievements And Prospects development immunoprophylaxis. Main provisions modern concepts of vaccination prevention. Expanded immunization program, stages of its implementation. Organization and implementation of vaccination. Types preventive vaccinations. Vaccinations planned And By epidemic indications. Ways to improve the calendar of preventive vaccinations.	GPC - 2 GPC - 4 PC - 9 PC - 11	2
4.	Organizational bases of anti-epidemic work. Epidemiological surveillance. The concept is "anti-epidemic system". Organization of anti-epidemic activities. Grouping anti -epidemic measures according to their impact on the source of infection, mechanisms and routes of transmission, and the susceptible organism. Legal bases of executive activity in the anti-epidemic system. Hospitalization of pa-	UC - 1 GPC - 2 GPC - 4 PC - 9 PC - 11	2

	tients according to epidemiological indications. State sanitary epidemiological supervision as a structural unit in the system of anti-epidemic protection of the population definition And content (information, diagnostic subsystems).		
5.	Epidemiological diagnostics. Definition and structure of epidemiological diagnostics. Diagnostic thinking. Basic forms. Algorithm of epidemiological diagnostics.	UC - 1 GPC - 4 PC - 11	2
6.	Epidemiological studies. Epidemiological analysis. Organizational diagram, main stages of epidemiological studies. Descriptive studies. Screening tests: definition of the concept, requirements for tests. Risk groups, time and territories. Analytical epidemiological studies. Cohort study – direction of search for the cause of the disease – “from cause to effect” Features of the organization and examples of conducting retrospective (by historical cohort) and prospective, continuous and selective, scientific and routine cohort studies. Case-control study. Experimental epidemiological studies. Randomized clinical trial.	UC - 1 GPC - 2 GPC - 4 PC - 11	2
7.	Epidemiology and prevention of anthroponoses with feco-oral transmission mechanism. Epidemiological features of intestinal infections caused by the general mechanism of transmission (infectivity, resistance of pathogens in the external environment, seasonality, periodicity, preventive measures). General characteristics of the manifestations of the epidemic process. Types of outbreaks: water, food, household. Primary anti-epidemic measures in epidemiological foci, medical examination. Main areas of prevention	GPC - 2 GPC - 4 PC – 9 PC - 11	2
8.	Epidemiology and prevention of anthroponoses with aerosol transmission mechanism. Social and economic significance of respiratory tract infections. Prevalence, manifestations of the epidemic process. Ways of implementing the aspiration mechanism of transmission. Preventive and anti- epidemic measures, their potential and real effectiveness. Features of the epidemiology of diphtheria, measles, meningococcal infection, influenza in modern conditions.	GPC - 4 GPC – 6 PC – 9 PC - 11	2
9.	Epidemiology and prevention of healthcare-associated infections (HAI). Relevance problems on the present stage. Epidemiological, economic and social significance hospital infections. Etiology. Classification. Sources of hospital infec-	UC - 1 GPC - 2 PC – 9	2

	tions, exogenous And endogenous infection. Potential role medical workers in the spread of hospital infections. Preventive And anti-epidemic events. Sanitary-hygienic and anti-epidemic regime of medical organizations (MO). Prevention hospital infections among medical workers.	PC - 11	
10.	Content and organization of anti-epidemic measures during emergency situations and wartime. Biological weapons and defense. Classification of emergency situations and their consequences. Characteristics of epidemiological foci in emergency areas. Complex of preventive and anti-epidemic measures during the liquidation of emergency situations. Sanitary and epidemiological intelligence (SEI), types. Organization of protection in biological lesions. Biological weapons, bioterrorism. Features of detection, isolation and evacuation of infectious patients. Anti-epidemic regime and strict anti-epidemic regime at the stages of medical evacuation. Contents and organization of activities during observation and quarantine. General and special emergency prevention in bacterial infection foci.	UC - 1 GPC - 4 GPC – 6 PC – 9 PC-11	2
Total hours			20

2.3. Thematic plan of practical classes and their content

Item No.	Name of the topics of practical classes	Contents of practical classes	Codes of formed competencies and indicators of their achievements	Types of control	Labor intensity (watch)
1	Morbidity is the main subject of epidemiology. Goals, objectives and methods of epidemiology. Epidemiological approach to the study of human diseases, Epidemiological process. Epidemiological focus.	Entrance control (checking theoretical knowledge from related disciplines. Theoretical part: Structure, goals and objectives of modern epidemiology. "Epidemic process". Main characteristics of the epidemic process. Ecological and epidemiological classification of infectious diseases (anthroponoses, zoonoses, Saproponoses). Source of infection. Transmission mechanism. Routes and factors of transmission. Susceptibility of the population. Biological, social, natural factors. Manifestations of the epidemic process (by intensity). Endemic and exotic diseases. Endemic diseases of the Amur region. Epidemic focus, its structure. The doctrine of natural focality of E.N. Pavlovsky. Definition of the concept of "natural focus". Practical part: Organization and preparation of a plan for preventive and anti-epidemic measures and determination of the type of epidemiological process.	UC -1. AI:1.1	Frontal survey. Testing in the Moodle system . Situational task. Interactive methods.	5.2
2.	Direction and organization of disinfection measures. Disinfection business. Disinsection . Deratization.	Theoretical part: Types of disinfection (preventive and focal). Methods of disinfection (mechanical, physical, chemical). Characteristics of groups of disinfectants. Requirements for	GPC-4. AI : 4.1 PC – 9. AI : 9.3 PC - 11 AI :11.1	Frontal survey. Testing in the Moodle system . Situational task. Interactive	5.2

		disinfectants. Features of preparation of working solutions. Sterilization. Sterilization methods: steam, air, radiation, thermal, chemical. Sterilization quality control. Classification of medical waste. Disinfection chambers, types, device, operating mode. Disinsection, its purpose and role in various diseases. Disinsection in medical organizations. Deratization. Methods and means. Epidemiological significance of rodents in the Amur Region. Practical part: 1. Working with disinfection equipment (disinfal, automax, hydro-console). 2. Operation of steam and steam-formaldehyde chambers (carried out in the disinfection department of a medical organization). 3. Preparation of disinfectant solutions for disinfection in areas where various infectious diseases occur.		methods.	
3.	Susceptibility of the population to infectious diseases. The role of immunoprophylaxis of infectious diseases in the system of preventive and anti-epidemic measures. Organization of immunoprophylaxis.	Theoretical part: The place of immunoprophylaxis in the system of preventive and anti-epidemic measures. The national calendar of preventive vaccinations as a normative legal act regulating the timing, sequence, and scheme of vaccine use. Federal program "Vaccination. Vaccines. Indications and contraindications for vaccination. Organization of immunoprophylaxis of infectious diseases. Criteria for assessing the effectiveness of vaccination. Post-vaccination reactions. Post-vaccination complications. Serums, immu-	UC -1. AI : 1.1 GPC -4. AI : 4.1 GPC -2. AI : 2.3 PC-9. AI : 9.2, 9.3 PC-11. AI :11.1; 11.2	Frontal survey. Testing in the Moodle system . Situational task. Interactive methods.	5.2

		noglobulins. "Cold chain". Vaccination of the population with various somatic pathologies. Accounting and reporting documentation (form 063-card of preventive vaccinations, form 064-journal of preventive vaccinations, form 156-certificate of preventive vaccinations). Legal basis for immunoprophylaxis. Federal Law of 30.03.1999 No. 52 "On the sanitary and epidemiological well-being of the population"; Federal Law No. 323 of 21.11.2011 "On the Protection of Health of Citizens of the Russian Federation"; Federal Law No. 157 of 17.09.98 "On Immunoprophylaxis of Infectious Diseases". Practical part: Drawing up a plan for preventive vaccinations, working with a card index, vaccination certificate, filling out forms 63, 64, 156, drawing up a vaccination plan, solving situational problems, preparing a workbook, working with educational, scientific, medical and reference literature.			
4.	Preventive and anti-epidemic measures in foci of infectious diseases. Organization and legal basis of anti-epidemic activities of a physician - therapist. Sanitary and epidemiological supervision.	Theoretical part: Anti-epidemic work: organization of vaccination prevention, place of treatment and prevention in the work of a general practitioner, prevention of helminthiasis, medical examination. Anti-epidemic regime in medical organizations. Infectious diseases office in a polyclinic. Measures aimed at the source of infection (isolation, hospitalization). Measures aimed at breaking the mechanism of infec-	UC -1. AI :1.1 GPC -2. AI : 2.3 GPC -4. AI : 4.1 PC-9. AI : 9.1, 9.2; 9.3 PC-11. AI : 11.1; 11.2.	Frontal survey. Testing in the Moodle system . Situational task. Interactive methods.	5.2

		tion transmission (disinfection, Disinsection, Deratization). Measures in relation to contact persons (observation, laboratory testing, emergency prevention). Documentation (form 058 - emergency notification card, form 060 - registration log of infectious patients, card of epidemiological examination of the outbreak - form 357 y). Practical part: Drawing up a plan of anti-epidemic and preventive measures in an epidemic outbreak, conducting an examination of an epidemic outbreak with filling out an epidemiological examination card of the outbreak, an emergency notification of an infectious disease (form 058), drawing up an epidemiological examination card of the outbreak and a report to the teacher, solving situational problems, drawing up a workbook, working with educational, scientific, medical and reference literature.			
5.	Epidemiological research and organization of its implementation. Epidemiological diagnostics. Epidemiological analysis. Types of epidemics.	Theoretical part: Descriptive epidemiological studies. Risk factors. Risk groups. Risk areas. Epidemiological surveillance: screening studies. Analytical epidemiology: cohort studies, case-control studies. Experimental methods: controlled experiment, uncontrolled experiment. Natural experiment. Retrospective and operational epidemiological analysis. The concept of intensity of the epidemiological process (sporadic incidence, epidemic outbreak, epidemic, pandemic, endemic, exotic disease). Intensive and extensive indicators. Types of epidemics	UC -1. AI :1.1 GPC -4. AI : 4.1 PC-11. :11.1; 11.2.	Frontal survey. Testing in the Moodle system . Situational task. Interactive methods.	5.2

		(water, food, contact, airborne, transmissible). Organization of preventive and anti-epidemic measures. Practical part: Graphic representation of epidemic types in workbooks, work on calculating the main indicators of population morbidity (intensive, extensive, lethality, mortality), solving situational problems, designing a workbook, working with educational, scientific, medical and reference literature.			
6.	Epidemiological characteristics of a group of intestinal infections . Epidemiological survey of intestinal infection foci. Preventive and anti-epidemic measures for helminthiases.	Theoretical part: Epidemiological characteristics of infections with feco-oral mechanism of transmission. Shigellosis, salmonellosis, cholera, Escherichiosis, rotavirus infections. Viral hepatitis A and E, poliomyelitis, etc. Water, food, contact-household routes of transmission. The importance of social and hygienic measures for the prevention of diseases with the feco-oral mechanism of transmission. Preventive and anti-epidemic measures. Epidemiology and prevention of parasitic diseases. Biological characteristics of helminths. Natural focal infections. Helminthiasis of the Amur Region. Anti-epidemic measures. Epidemiology and prevention of zoonotic and saprozoic infections. Bacterial: brucellosis, plague, tularemia, campylobacteriosis, leptospirosis, salmonellosis, anthrax. Viral zoonoses: hemorrhagic fevers, rabies. Rickettsioses. Chlamydia, borreliosis. Transmissible and non-	GPC - 2. AI : 2.3 GPC -4. AI : 4.1 PC-9. AI : 9.1; 9.2; 9.3. PC – 11. AI : 11.1; 11.2.	Frontal survey. Testing in the Moodle system . Situational task. Interactive methods. Epidemiological survey map of the outbreak	5.2

		transmissible zoonoses. The role of insects in the transmission of arbovirus infections. Anti-epidemic measures. Sapronoses: prevalence, epidemiology, epidemiological surveillance, prevention. Practical part: Registration of form 357 in epidemic foci of patients with acute intestinal infections, solving situational problems, registration of a workbook, work with educational, scientific, medical and reference literature.			
7.	Epidemiological characteristics of anthroponoses with aspiration transmission mechanism (respiratory tract infections). Epidemiological survey of foci of aerosol infections.	Theoretical part: Epidemiological characteristics of a group of infections with aspiration transmission mechanism. Bacterial diseases: diphtheria, whooping cough, paraptussis, streptococcal and meningococcal infection. Viral diseases: influenza and acute respiratory viral infections, measles, mumps, chickenpox, rubella, infectious mononucleosis, herpes infection, cytomegalovirus infection. Focus of preventive and anti-epidemic measures. Work of a district therapist in the event of sporadic and mass cases of infectious diseases. Vertical transmission in rubella, herpes infection and other nosologies. Vaccine prophylaxis. Peculiarities of epidemiological surveillance. Practical part: Familiarization with graphs, diagrams of the dynamics of respiratory tract infection incidence, anti-epidemic and preventive	GPC -2. AI : 2.3 GPC -6. AI : 6.4 GPC -4. AI :4.1; PC-9. AI : 9.1; 9.2; 9.3. PC – 11. AI: 11.1; 11.2.	Frontal survey. Testing in the Moodle system . Situational task. Interactive methods. Epidemiological survey map of the outbreak	5.2

		measures in outbreaks, examination of an epidemic outbreak with an aerosol transmission mechanism (flu and acute respiratory viral infections), preparation of documentation (form 357, form 058), solving situational problems, preparation of a workbook, work with educational, scientific, medical and reference literature.			
8.	Epidemiological characteristics and anti-epidemic measures for viral hepatitis and HIV infection. Transmissible natural focal diseases (HFRS, tick-borne spring-summer encephalitis, borreliosis, tick-borne rickettsiosis, tick-borne rickettsiosis). Preventive and anti-epidemic measures.	Theoretical part: Epidemiological characteristics. Sources of infection, transmission mechanism, factors and ways of implementation. High-risk groups. Prevention. Epidemiological surveillance. Sanitary and epidemiological rules SP 3.1.5.2826-10 "Prevention of HIV infection" Epidemiological characteristics and prevention of parenteral viral hepatitis. Epidemiological surveillance Epidemic typhus, Brill's disease, epidemic relapsing fever. Features of the epidemic process. Epidemiological significance of lice. Preventive and anti-epidemic measures. Peculiarities of the epidemic process in tick-borne spring-summer encephalitis, borreliosis and tick-borne rickettsiosis. Non-specific and specific prevention. Epidemiology of hemorrhagic fever with renal syndrome. Epidemiological significance of rodents in the Amur region. Preventive and anti-epidemic measures. Practical part: Work with regulatory documents, orders, municipal regulations, and special regula-	GPC -2. AI :2.3 GPC -6. AI : 6.3, 6.4 GPC -4. AI : 4.1 PC-9. AI : 9.1; 9.2; 9.3. PC-11. AI :11.1; 11.2.	Frontal survey. Testing in the Moodle system . Situational task. Interactive methods. Epidemiological survey map of the outbreak	5.2

		tions on the prevention of HIV infection and viral hepatitis, modeling an epidemic outbreak of HIV infection and organizing preventive and anti-epidemic measures, drawing up a map of the epidemiological survey of an outbreak of acute and chronic viral hepatitis, solving situational problems, preparing a workbook, working with educational, scientific, medical and reference literature.			
9.	Preventive and anti-epidemic measures for infections associated with medical care. Anti-epidemic measures for especially dangerous infections. Sanitary protection of the country's territory. International sanitary rules.	Theoretical part: Factors contributing to the emergence of HAI. Epidemiological process in various HAI: sources, factors and transmission routes. Risk groups. Hospital strains and their characteristics. Sanitary-hygienic and anti-epidemic regime in medical organizations. Prevention of HAI among medical workers. Content and organization of epidemiological surveillance of HAI. Prevention of occupational infection with HIV, hepatitis viruses. Procedure for information on the detection of quarantine infections. The concept of "quarantine", "observation". Organization of work of the hospital for patients with quarantine infections, its structure. Activities concerning persons who have been in contact with patients with quarantine infections. Use of personal protective equipment for medical workers when working in outbreaks of quarantine infections. Practical part: Compilation and execution of a map of the	UC -1. AI : 1.1 GPC -2. AI : 2.3 GPC -4. AI : 4.1 GPC -6. AI : 6.2, 6.3, 6.4 PC-9. AI : 9.1; 9.3. PC-11. AI : 11.1; 11.2.	Frontal survey. Testing in the Moodle system . Situational task. Interactive methods.	5.2

		epidemiological survey of the outbreak, preparation of an algorithm for anti-epidemic work in the outbreak of HAI. Filling out the "Emergency situation" log in case of damage to the integrity of the skin of health workers. MO, solving situational problems, preparing a workbook, working with educational, scientific, medical and reference literature.			
10.	Preventive and anti-epidemic measures in emergency situations. Biological weapons. Organization of anti-epidemic measures using biological agents and elimination of the consequences of their use. Protection of civilians and troops during medical evacuation. Passed.	Theoretical part: Anti-epidemic and preventive measures in areas of natural disasters and catastrophes. Organization of work of sanitary and epidemiological institutions (divisions) in extreme conditions and in wartime. Content and organization of anti-epidemic measures in "emergencies" and in wartime. Specialized (non-staff) formations: sanitary and epidemiological detachments, sanitary and epidemiological teams. Their tasks, structure and principles of work. Sanitary and epidemiological reconnaissance (SER), its tasks. Criteria for assessing the sanitary and epidemiological state of troops and the area of their action. Stages of medical evacuation, anti-epidemic mode of work. Transfer of the stage to a strict anti-epidemic regime . Biological weapons. Organization of anti-epidemic measures using biological agents and the elimination of the consequences of their use. Bioterrorism. Characteristics of biological agents used by bioterrorists. Practical part: Work in the OEI box, drawing up a plan	UC -1. AI : 1.1 GPC -2. AI : 2.3 GPC -4. AI : 4.1 GPC -6. AI : 6.2, 6.3, 6.4; PC-9. AI : 9.1; 9.2; 9.3. PC-11. AI :11.1.	Testing in the Moodle system . (final). Solving situational problems. Survey on questions for the test. Passing practical skills.	5.2

		for anti-epidemic measures upon detection of OEI (plague, cholera) Practicing methods of working in a plague suit, solving situational problems, preparing a workbook, working with educational, scientific, medical and reference literature. <u>The interim assessment includes:</u> - assessment of knowledge of theoretical material; - testing in the Moodle system; - testing the acquisition of practical skills and abilities; - solving situational problems.			
Total hours					52

2.4. Interactive forms of learning

interactive methods are widely used in practical classes. training (interactive survey, work in small groups, round table, brainstorming, etc.), participation in educational and research and scientific research work.

Item No.	Topic of practical lesson, lecture	Labor intensity in hours	Interactive form of learning	Labor intensity in hours, in % of the lesson
1.	Morbidity is the main subject of epidemiology. Goals, objectives and methods of epidemiology. Epidemiological approach to the study of human diseases, Epidemiological process. Epidemiological focus	5.2	Round table	20 min. (0.44 h.) 8.5%
2.	Direction and organization of disinfection measures. Disinfection business. Disinsection. Deratization.	5.2	Brainstorming	20 min. (0.44 h.) 8.5%
3.	Susceptibility of the population to infectious diseases. The role of immunoprophylaxis of infectious diseases in the system of preventive and anti-epidemic measures. Organization of immunoprophylaxis.	5.2	Round table	20 min. (0.44 h.) 8.5%
4.	Preventive and anti-epidemic measures in infectious disease foci. Organization and legal basis for anti-epidemic activities of a physician - therapist. Sanitary and epidemiological supervision.	5.2	Brainstorming	30 min. (0.66 h.) 12.8%
5.	Epidemiological research and organization of its implementation. Epidemiological diagnostics. Epidemiological analysis. Types of epidemics.	5.2	Small group method	30 min. (0.66 h.) 12.8%
6.	Epidemiological characteristics of a group of intestinal infections. Epidemiological survey of intestinal infection foci. Preventive and anti-epidemic measures for helminthiasis.	5.2	Role play	40 min. (0.88 h.) 17.1%
7.	Epidemiological characteristics of anthroponoses with aspiration transmission mechanism (respiratory tract infections). Epidemiological survey of foci of aerosol infections.	5.2	Role play	40 min. (0.88 h.) 17.1%
8.	Epidemiological characteristics and anti-epidemic measures for viral hepatitis and HIV infection. Transmissible natural focal diseases (HFRS, tick-borne spring-summer encephalitis, borreliosis, tick-borne rickettsiosis, tick-borne rickettsiosis). Preventive and anti-epidemic measures.	5.2	Round table	40 min. (0.88 h.) 17.1%
9.	Preventive and anti-epidemic measures	5.2	Role play	30 min.

	for infections associated with medical care. Anti-epidemic measures for especially dangerous infections. Sanitary protection of the country's territory. International sanitary rules.			(0.66 h.) 12.8%
10.	Preventive and anti-epidemic measures in emergency situations. Biological weapons. Organization of anti-epidemic measures using biological agents and elimination of the consequences of their use. Protection of civilians and troops during medical evacuation.	5.2	Round table	30 min. (0.66 h.) 12.8%

2.5. Criteria for assessing students' knowledge

The assessment of students' learning outcomes in the discipline is carried out in accordance with the "Regulations on the system of assessment of students' learning outcomes of the Federal State Budgetary Educational Institution of Higher Education Amur State Medical Academy of the Ministry of Health of Russia.

The basis for determining the level of knowledge, skills, and abilities are the assessment criteria:

- completeness and correctness;
- correct, precise answer;
- correct, but incomplete or inaccurate answer;
- incorrect answer;
- no answer.

When assigning marks, the classification of errors and their quality are taken into account:

- gross errors;
- similar errors;
- minor errors;
- shortcomings.

Evaluation criteria

Quality of development	Mark on a 5-point scale
90 - 100%	"5"
80 - 89%	"4"
70 - 79%	"3"
less than 70%	"2"

Incoming inspection

Conducted during the first lesson, includes: testing in the Moodle system.

The test control includes questions from related disciplines.

Access mode <https://educ-amursma.ru/mod/quiz/view.php?id=8256>

Current control

Current control includes initial and final control of knowledge.

Initial control **is** carried out by the teacher at the beginning of each lesson in the form of a frontal oral survey, testing in the Moodle system.

Access mode <https://educ-amursma.ru/course/view.php?id=263>

Final control – includes solving situational problems, drawing up a map of the epidemiological survey of the outbreak, and evaluating interactive forms of training.

The final grade during the current knowledge assessment is given on the day of the lesson, as the arithmetic mean result for all types of activities provided for in the given lesson of the discipline's work program.

Rating scales for ongoing knowledge control

The success of students in mastering sections of the discipline, practical skills and abilities is characterized by a qualitative assessment and is assessed on a 5-point scale: "5" - excellent, "4" - good, "3" - satisfactory, "2" - unsatisfactory. The conversion of the mark into a point scale is carried out according to the following scheme:

Criteria for assessing the oral response

“Excellent” - the student demonstrates deep and complete knowledge of the educational material, does not allow inaccuracies or distortions of facts when presenting, presents the material in a logical sequence, is well oriented in the presented material, and can provide justification for the judgments expressed.

"Good!" - the student has mastered the educational material in full, is well oriented in the educational material, presents the material in a logical sequence, but makes inaccuracies in his answer.

“Satisfactory” – the student has mastered the basic principles of the topic of the practical lesson, but when presenting the educational material, he/she makes inaccuracies, presents it incompletely and inconsistently, requires leading questions from the teacher to present it, and has difficulty substantiating the judgments expressed.

“Unsatisfactory” – the student has fragmented and unsystematic knowledge of the educational material, is unable to distinguish between the main and the secondary, makes mistakes in defining basic concepts, distorts their meaning, and cannot independently present the material.

Assessment criteria for the practical part

“Excellent” - the student has fully mastered the practical skills and abilities provided by the course work program (correctly collects an epidemiological anamnesis from a patient, formulates an epidemiological diagnosis, carries out preventive and anti-epidemic measures, correctly works and fills out documentation).

“Good” – the student has fully mastered the practical skills and abilities provided by the course program, but makes some inaccuracies.

“Satisfactory” - the student has only some practical skills and abilities.

“Unsatisfactory ” - the student performs practical skills and abilities with gross errors.

Criteria for assessing independent extracurricular work:

- the level of student mastery of the educational material;
- the completeness and depth of general educational concepts, knowledge and skills on the topic being studied, to which this independent work relates;
- development of universal and general professional competencies (ability to apply theoretical knowledge in practice).
- the problems were solved correctly, the exercises were completed, and the test assignments were answered accurately – “passed”.

- Problems were not solved correctly, exercises were not completed correctly, test questions were not answered accurately – “failed”.

Essay evaluation criteria:

- **“Excellent”** – awarded to a student if he has prepared a complete, detailed, and formatted according to requirements, abstract on the chosen topic, presented his work in the form of a report with a computer presentation, and answered questions on the topic of the report;
- **“Good”** – awarded to a student for a complete, detailed essay that is formatted according to requirements, but poorly presented;
- **“Satisfactory”** – the abstract does not contain information on the issue being studied in full, is formatted with errors, and is poorly presented;
- **“Unsatisfactory”** is given to a student if the paper is not written, or is written with serious errors, the report and computer presentation are not prepared, or their content does not correspond to the topic of the paper.

Evaluation criteria for the educational map of the epidemiological survey of the outbreak

“Excellent” - the educational card is completed in accordance with the requirements.

“Good” - in the educational record the student makes some inaccuracies in the correctness of the implementation of preventive and anti-epidemic measures.

“Satisfactory” - the study card is filled with errors, written in illegible handwriting, There were inaccuracies in the formulation of the epidemiological diagnosis, and anti-epidemic measures in the outbreak were not fully implemented.

“Unsatisfactory” - the card is written in illegible handwriting, with gross errors (anti-epidemic measures were carried out incorrectly with respect to the source of infection, transmission routes and susceptible population. The student does not know the Sanitary Rules and Regulations for the relevant nosology).

Assessment of competencies in business and role-playing games

Rating scale	Evaluation criteria
“Excellent” if the task is completed in full.	– most of the problems posed by the game’s authors were formulated and analyzed; – adequate analytical methods were demonstrated when working with information; – additional sources of information were used to solve the problems posed; – all necessary calculations were performed, – documents prepared in the course of solving the problem meet the requirements for them in terms of meaning and content; – the conclusions are justified, the arguments are compelling; – we have made our own conclusions that distinguish the solution to this problem from standard solutions.
“Good” if the task is completed with minor errors.	
"Satisfactory" if the student demonstrates knowledge and understanding of most of the task.	

Working off disciplinary debts.

If a student misses a class for a valid reason, he/she has the right to make it up and receive the maximum grade provided for by the course work program for that class. A valid reason must be documented.

If a student misses a class for an unjustified reason or receives a "2" mark for all activities in the class, he/she is required to make it up. In this case, the mark received for all activities is multiplied by 0.8.

If a student is excused from a class at the request of the dean's office (participation in sports, cultural and other events), then he is given a grade of "5" for this class, provided that he submits a report on the completion of mandatory extracurricular independent work on the topic of the missed class.

Assessment criteria for midterm assessment

Midterm assessment (test in the 9th semester) is designed to assess the degree of achievement of planned learning outcomes upon completion of the course and allows for an assessment of the level and quality of its mastery by students.

The students' success in mastering the discipline is assessed on a 5-point scale: "5" – excellent, "4" – good, "3" – satisfactory, "2" – unsatisfactory.

Criteria for final assessment (midterm assessment)

"Excellent" - for the depth and completeness of mastery of the content of the educational material, in which the student easily navigates, for the ability to connect theoretical questions with practical ones, express and justify their judgments, correctly and logically present the answer; when testing, allows up to 10% of erroneous answers. Practical skills and abilities provided for by the working program of the discipline are fully mastered.

"Good" - the student has fully mastered the educational material, is oriented in it, correctly states the answer, but the content and form have some inaccuracies; during testing allows up to 20% of erroneous answers. Completely practical skills and abilities provided by the working program of the discipline, but allows some inaccuracies

"Satisfactory" - the student has mastered the knowledge and understanding of the main provisions of the educational material, but presents it incompletely, inconsistently, does not know how to express and justify his/her judgments; during testing, allows up to 30% of erroneous answers. Has only some practical skills and abilities.

"Unsatisfactory" - the student has fragmented and unsystematic knowledge of the educational material, is unable to distinguish between the main and secondary, makes mistakes in defining concepts, distorts their meaning, presents the material in a disorderly and uncertain manner, and makes more than 30% of erroneous answers during testing. Performs practical skills and abilities with gross errors.

Based on the results of different assessments, an average grade is given in favor of the student.

A student can claim to receive an "excellent" grade automatically if he/she has won a prize in disciplinary or interdisciplinary Olympiads (university, regional) and has an average grade for the current academic performance of at least 4.8 points. A student can refuse the "automatic" grade and take an exam or test together with a group on a general basis.

Interim assessment is carried out through the test passing system. in 4 stages:

1. Test control in the "Moodle" system.
Access mode: <https://educ-amursma.ru/mod/quiz/view.php?id=8268>
2. Passing practical skills (competencies).
3. Answers to questions for the test.
4. Solving situational problems.

Test control evaluation criteria

"5" excellent - 90-100% correct answers

"4" is good - 80-89% correct answers

"3" satisfactory - 70-79% correct answers

"2" is unsatisfactory – less than 70% of correct answers.

Assessment criteria for midterm assessment

"Passed":

- for the depth and completeness of mastering the content of the educational material, in which the student easily navigates, can express and justify his/her judgments, correctly and logically state the answer, and allows up to 10% of erroneous answers during testing. Practical skills and abilities provided for by the working program of the discipline are fully mastered;

- the student has fully mastered the educational material, is oriented in it, correctly states the answer, but the content and form have some inaccuracies; during testing

allows up to 20% of incorrect answers. Has fully mastered the practical skills and abilities provided by the course work program, but allows for some inaccuracies;

- the student has mastered the knowledge and understanding of the main provisions of the educational material, but presents it incompletely, inconsistently, does not know how to express and substantiate his judgments; during testing, allows up to 30% of erroneous answers and possesses only some practical skills and abilities.

"Not accepted":

- the student has fragmented and unsystematic knowledge of the educational material, is unable to distinguish between the main and the secondary, makes mistakes in defining concepts, distorts their meaning, presents the material in a disorderly and uncertain manner, and makes more than 30% of erroneous answers when tested. Performs practical skills and abilities with gross errors.

The conversion of the mark into a binary scale is carried out according to the following scheme:

Mark on a 5-point scale	Binary scale
"5"	passed
"4"	passed
"3"	passed
"2"	not credited

2.6. Independent work of students: in-class, out-of-class

Independent work of students consists of two components: classroom and extracurricular (mandatory for all students and optional) work.

2.6.1. Independent classroom work

Independent classroom work of students makes up 25% of the time allocated for the lesson. Classroom work includes : the main didactic tasks of independent work of students under the guidance of the teacher: consolidation of knowledge and skills acquired during the study of the academic discipline in lectures and practical classes; prevention of their forgetting; expansion and deepening of the educational material; formation of the ability and skills of independent work; development of independent thinking and creative abilities of students.

Independent classroom work of students in practical classes on epidemiology consists of the fact that students study the organization of the disinfection regime in medical organizations. They get acquainted with the disinfection and sterilization of medical instruments, carry out activities at f-

20. They are trained in methods of immunoprophylaxis of infectious diseases. They collect an epidemiological anamnesis at the bedside of patients, independently conduct an epidemiological survey and epidemiological analysis with the calculation of the main epidemiological indicators. They characterize the types of epidemics and are engaged in epidemiological analysis and calculate the main epidemiological indicators of morbidity. They conduct sanitary and epidemiological reconnaissance with the compilation of a report card of sanitary and epidemiological reconnaissance. Independently give an epidemiological description of individual groups of anti-epidemic measures. They get acquainted with and prepare medical documentation (child development history form F-112, emergency notification of infectious disease, food poisoning, acute occupational poisoning, unusual reaction to vaccination form F-058, infectious disease registration log form F-060, preventive vaccination certificate form F-156, epidemiological survey cards for foci form F-357), morbidity accounting and reporting documentation (form 1.5), work in a box for especially dangerous infections, study types of anti-plague suits, and solve situational problems.

2.6.2 Extracurricular independent work of students

The following can be used as the main forms of extracurricular independent work: studying basic and additional educational and scientific literature; solving situational problems, test assignments, working in an Internet class; preparing oral reports; participating in lectures and discussions, showing films and presentations dedicated to World AIDS Day.

This type of educational activity should be based on the activity, initiative, consciousness and self-activity of students.

No.	Topic of the practical lesson	Time for student preparation for the lesson	Forms of extracurricular independent work	
			Mandatory and the same for all students	At the student's choice
1	Morbidity is the main subject of epidemiology. Goals, objectives and methods of epidemiology. Epidemiological approach to the study of human diseases, Epidemiological process. Epidemiological focus	2	Preparation for a practical lesson (reading lectures, basic and additional literature, drawing up a plan and theses of the answer, taking notes on the text, solving situational problems, a test task	1.Preparing a computer presentation. 2. Literature review on the topic. 3. Compiling and filling in tables and diagrams. 4.Preparation of an abstract. "The goals and objectives of epidemiology at the present stage. The role of epidemiology in the elimination of individual forms of infectious diseases."
2	Direction and organization of disinfection measures. Disinfection business. Disinsection. Deratization.	2	Preparation for a practical lesson (reading lectures, primary and secondary literature, drawing up a plan and summary of the answer, taking notes on the text, solving situational prob-	1.Preparing a computer presentation. 2. Literature review on the topic. 3. Compilation and filling of tables, diagrams, algorithms 4.Preparation of the

			lems, and a test assignment).	abstract. "Disinfectionology expands its boundaries"
3	Susceptibility of the population to infectious diseases. The role of immunoprophylaxis of infectious diseases in the system of preventive and anti-epidemic measures. Organization of immunoprophylaxis.	2	Preparation for a practical lesson (reading lectures, primary and secondary literature, drawing up a plan and summary of the answer, taking notes on the text, solving situational problems, and a test assignment). Filling out form f-156-u (certificate of preventive vaccinations).	1.Preparing a computer presentation. 2. Filling in tables, diagrams, algorithms. 3. Literature review on the topic. 4.Preparing the conversation, memos 5.Preparation of the abstract. "Vaccines of the Future"
4	Preventive and anti-epidemic measures in foci of infectious diseases. Organization and legal basis for anti-epidemic activities of a physician - therapist. Sanitary and epidemiological supervision.	2	Preparation for practical classes (lectures, basic and additional literature, taking notes on the solution of situational problems, test assignments, work in an online classroom.) Registration of the epidemiological survey card of the outbreak according to forms 357, 171. Filling out form 058-u (emergency notification card)	1.Preparing a computer presentation. 2. Literature review on the topic. 3. Compilation and filling in tables, diagrams, algorithms. 4.Preparation of an abstract. "The role of a physician - therapist in the prevention of infectious diseases."
5	Epidemiological research and organization of its implementation. Epidemiological diagnostics. Epidemiological analysis. Types of epidemics.	2	Preparation for a practical lesson (reading lectures, basic and additional literature, solving situational problems, a test assignment. Construction of tables, graphs, calculation of the main statistical indicators of morbidity with preparation in a workbook.	1.Preparing a computer presentation. 2. Literature review on the topic. 3. Compiling and filling in tables and diagrams. 4.Preparation of an abstract. "Risk in epidemiology".
6	Epidemiological characteristics of a group of intestinal infections. Epidemiological survey of intestinal infection foci. Preventive and anti-epidemic measures for helminthiasis.	2	Preparation for a practical lesson (reading lectures, basic and additional literature, drawing up a plan and theses of the answer, taking notes on the text, solving situational problems, a test task, drawing up maps of epidemiological surveys of acute intestinal infections foci.	1.Preparing a computer presentation. 2. Literature review on the topic. 3. Compilation and filling in tables, diagrams, conversations, memos. 4.Preparation of an abstract. "Epidemiological aspects of helminthiasis in the Amur region."

7	Epidemiological characteristics of anthroponoses with aspiration transmission mechanism (respiratory tract infections). Epidemiological survey of foci of aerosol infections.	2	Preparation for a practical lesson (reading lectures, basic and additional literature, solving situational problems, a test assignment. Drawing up maps for surveying epidemic foci of droplet infections.	1.Preparing a computer presentation. 2. Literature review on the topic. 3. Compilation and filling in tables, diagrams, conversations, memos. 4.Preparation of an abstract. "Epidemiology of coronavirus infection".
8	Epidemiological characteristics and anti-epidemic measures for viral hepatitis and HIV infection. Transmissible natural focal diseases (HFRS, tick-borne spring-summer encephalitis, borreliosis, tick-borne rickettsiosis, tick-borne rickettsiosis). Preventive and anti-epidemic measures.	2	Preparation for practical classes (lectures, basic and additional literature, solving situational problems, test assignments. Drawing up maps for surveying epidemic foci of viral hepatitis and HIV infection.	1.Preparing a computer presentation. 2. Literature review on the topic. 3. Drawing up diagrams, algorithms, memos and posters, conversations. 4.Preparation of an abstract. "Epidemiology and prevention of HIV infection." 5. Review of Internet sources on the topic.
9	Preventive and anti-epidemic measures for infections associated with medical care. Anti-epidemic measures for especially dangerous infections. Sanitary protection of the country's territory. International sanitary rules.	2	Preparation for a practical lesson (reading lectures, basic and additional literature, solving situational problems, a test assignment.	1.Preparing a computer presentation. 2. Literature review on the topic. 3. Drawing up diagrams and algorithms. 4.Preparation of an abstract. "Prevention of HAI in healthcare workers." 5. Review of Internet sources on the topic.
10	Preventive and anti-epidemic measures in emergency situations. Biological weapons. Organization of anti-epidemic measures using biological agents and elimination of the consequences of their use. Protection of civilians and troops during medical evacuation.	2	Preparation for practical training (lectures, basic and additional literature, solving situational problems, test assignment. Drawing up schemes for the deployment of anti-epidemic institutions. Drawing up a plan for the elimination of an epidemic outbreak in the case of acute respiratory infections.	1. Compilation and filling of tables, diagrams, algorithms
Labor intensity in hours		20	20	16
Total labor intensity (in hours)		36 hours		

2.7. Research (project) work of students.

Research work (project) (RW) of students is a mandatory section of the discipline and is aimed at the comprehensive formation of general cultural and professional competencies of students and involves the study of specialized literature and other scientific and technical information on the achievements of domestic and foreign science and technology in the relevant field of knowledge, participation in the scientific research of the department.

List of recommended topics for research (project) work:

1. Epidemiological features of infections associated with healthcare.
 2. Epidemiological features and control measures for individual nosoforms of zoonotic diseases.
 3. Epidemiological features and control measures for individual nosoforms of sapronotic diseases.
 4. Features of epidemiological surveillance for diseases with different transmission mechanisms.
 5. Assessment of the quality and effectiveness of preventive and anti-epidemic measures.
 6. Modern methods of manufacturing immunoprophylaxis agents.
 7. Sterilization and disinfection using modern methods and techniques.
 8. Clinical epidemiology (fundamentals of evidence-based medicine).
 9. Randomized clinical trials in the practice of a general practitioner.
- To evaluate research work, a binary assessment scale is adopted: "passed", "failed".

Evaluation criteria for research (project) work students' work:

- the material on the results of the research in the report is presented in detail, the specialized literature is well-developed, scientific and technical information on the achievements of domestic and foreign science and technology in the relevant field of knowledge is studied - "passed".
- the material on the results of the research in the report is not presented accurately enough, the special literature is poorly studied, the scientific and technical information on the achievements of domestic and foreign science and technology in the relevant field of knowledge is not studied - "failed".

III . EDUCATIONAL, METHODOLOGICAL, MATERIAL, TECHNICAL AND INFORMATIONAL SUPPORT OF THE DISCIPLINE:

3.1. Main literature:
1. Briko, N. I. Epidemiology: textbook / N. I. Briko, V. I. Pokrovsky - Moscow: GEOTAR-Media, 2017. - 368 p. - ISBN 978-5-9704-3665-3. - http://www.studmedlib.ru/book/ISBN9785970436653.html
3.2. Further reading:
1. Yushchuk, N. D. Epidemiology of infectious diseases / Yushchuk N. D. et al. - Moscow: GEOTAR-Media, 2014. - 496 p. - ISBN 978-5-9704-2824-5. - http://www.studmedlib.ru/ru/book/ISBN9785970428245.html
2. Kostinov, M. P. Epidemiology and vaccination against influenza in the context of COVID-19: a tutorial / M. P. Kostinov, E. G. Simonova, N. N. Filatov. - Moscow: GEOTAR-Media, 2021. - 112 p. - ISBN 978-5-9704-5987-4.- http://www.studmedlib.ru/book/ISBN9785970459874.html

3. Brazhnikov, A. Yu. General epidemiology with the basics of evidence-based medicine: a guide to practical classes: a tutorial / edited by V. I. Pokrovsky, N. I. Briko. - 2nd ed., correct-ed. and additional. - Moscow: GEOTAR-Media, 2018. - 496 p.: ill. - 496 p. - ISBN 978-5-9704-4256-2. - <http://www.studmedlib.ru/book/ISBN9785970442562.html>

3. 3. Educational and methodological support of the discipline, prepared by the department staff:

1. Figurnov V.A., Marunich N.A., Gavrilov A.V., Figurnova E.V. Monograph "Severe forms of hemorrhagic fever with renal syndrome in the Amur region". Latvia, Lambert Publishing House, 2019. P. 152.

Electronic and digital technologies:

1. Online course on the subject "Epidemiology" in the EIS FGBOU VO Amur State Medical Academy

Access mode <https://educ-amursma.ru/course/view.php?id=263>

Characteristics of modules in the electronic information and educational course

Educational	Controlling
Theoretical (lecture) material, scientific and educational films, video presentations.	Methodological recommendations for students on independent extracurricular work.
Methodological recommendations for students for practical classes.	List of recommended topics for abstracts and guidelines for abstract design.
Reference material, tables of standard values.	Tests of entrance, current and final knowledge control.

2. Multimedia presentations (Microsoft Power Point 2016), to lecture-type classes, according to the thematic plan of lectures:

Access mode <https://educ-amursma.ru/course/view.php?id=263>

1. "The main groups of disinfectants used in the Ministry of Defense. Modern means of disinfection"
2. "Chamber methods of disinfection. Types of chambers"
3. "Basics of Disinsection. Repellents"
4. "Structure and purpose of the outpatient clinic's KIZ"
5. "Prospects for the creation of new vaccines"
6. "Prevention of HIV infection"
7. "Epidemiological significance of rodents in the Amur region. Epidemiology of HFRS in the Amur region"
8. "Epidemiology of natural focal diseases in the Amur region"
9. "Modern Problems of Particularly Dangerous Infections in the World"
10. "Epidemiology of Tick-Borne Infections. Specific and Non-Specific Prevention"
11. "Epidemiology of helminthiasis"
12. "Prevention of parenteral viral hepatitis"
13. "Basics of Sterilization"
14. "Epidemiology and prevention of HAIs"
15. "Epidemiology and prevention of influenza"

16. "Biological weapons"
17. "Bacteriophages"
18. "Epidemiology of the Plague"
19. "Anti-plague suits. Types"
20. "E. Jenner and L. Pasteur, their merits in immunoprophylaxis"

3. Videos Access mode <https://educ-amursma.ru/course/view.php?id=263>

1. "Epidemiology and prevention of helminthiasis"
2. "Prevention of HIV infection"
3. "Anti-epidemic measures for acute respiratory infections"
4. "Anti-plague suits. Types"
5. "Isolating transport box"

4. Photographic materials

1. Photo album "Severe forms of HFRS"
2. Photo album "Helminthiasis, rare observations" 2014

5. Tables

1. "Main anti-epidemic organizations in emergency situations"
2. "Deratization"
3. "Disinsection"
4. "The main groups of preparations for disinfection"
5. "Documentation for work in epidemic foci"
6. "Disinfection"
7. "Epidemiology of HFRS in the Amur Region"

6. Stands:

1. "National calendar of preventive vaccinations"
2. "Disinfection"
3. "Basics of Disinsection" "Repellents"
4. "Biological weapons and means of protection"
5. "HIV infection prevention"
6. "Features of the development of the epidemiological situation for HFRS in the Amur Region"
7. "Natural focal infections in the Amur region"
8. "Epidemiological significance of rodents in the Amur region"
9. "Modern problems of especially dangerous infections in the world"

7. Handouts

1. Sets of immunobiological preparations (vaccines, toxoids, bacteriophages, serums, immunoglobulins).
2. A set of disinfectants.
3. Equipment for disinfection (automax, hydro-pistol).
4. Anti-pediculosis packing.
5. First aid kit for providing medical assistance in case of an emergency when working with blood and other biological fluids.
6. Folders with a selection of regulatory and methodological documents (SP, SanPiN, MU, MR, orders).

3.4. Equipment used for the educational process

1. Lecture hall No. 5 Gorky 101, License 90 P01№0035083 - Multimedia video projector, laptop, board, tables, benches
2. Study room No. 4 Battery, 15 -A9 -3- 10 tables, 2 cabinets, 1 bookcase, 25 chairs

3. Thematic class with visual aids (stands, tables, disinfection and vaccination preparations, disinfection equipment).
4. Online class

3.5. Professional databases, information and reference systems, electronic educational resources.

Name resource	Resource Description	Access	Resource address
Electronic library systems			
"Student Consultant" Electronic library of the medical university.	For students and teachers of medical and pharmaceutical universities. Provides access to electronic versions of textbooks, teaching aids and periodicals.	library, individual access	http://www.studmedlib.ru/
"Doctor's Consultant" Electronic Medical Library.	The materials posted in the library have been developed by leading Russian specialists based on modern scientific knowledge (evidence-based medicine). The information has been prepared taking into account the position of the scientific and practical medical society (world, European and Russian) in the relevant specialty. All materials have undergone mandatory independent review.	library, individual access	http://www.rosmedlib.ru/cgi-bin/mb4x
PubMed	Free search system in the largest medical bibliographic database Medline. Documents medical and biological articles from specialized literature, and also provides links to full-text articles.	library, free access	http://www.ncbi.nlm.nih.gov/pubmed/
Oxford Medicine Online.	A collection of Oxford medical publications, bringing together over 350 titles into a single, cross-searchable resource. Publications include The Oxford Handbook of Clinical Medicine and The Oxford Textbook of Medicine, the electronic versions of which are constantly updated.	library, free access	http://www.oxfordmedicine.com
Human Biology Knowledge Base	Reference information on physiology, cell biology, genetics, biochemistry, immunology, pathology. (Resource of the Institute of Molecular Genetics of the Russian Academy of Sciences.)	library, free access	http://humbio.ru/

Medical online library	Free reference books, encyclopedias, books, monographs, abstracts, English-language literature, tests.	library, free access	http://med-lib.ru/
Information systems			
Russian Medical Association	Professional Internet resource. Objective: to facilitate the implementation of effective professional activities of medical personnel. Contains the charter, personalities, structure, rules of entry, information about the Russian Medical Union.	library, free access	http://www.rmass.ru/
Web-medicine	The site presents a catalog of professional medical resources, including links to the most authoritative subject sites, journals, societies, as well as useful documents and programs. The site is intended for doctors, students, employees of medical universities and scientific institutions.	library, free access	http://webmed.irkutsk.ru/
Databases			
Worldwide health care organization	The site contains news, statistics on countries that are members of the World Health Organization, fact sheets, reports, WHO publications and much more.	library, free access	http://www.who.int/ru/
Ministry of Science and Higher Education of the Russian Federation	The website of the Ministry of Science and Higher Education of the Russian Federation contains news, newsletters, reports, publications and more.	library, free access	http://www.minobrnauki.gov.ru
Ministry of Education of the Russian Federation.	The website of the Ministry of Education of the Russian Federation contains news, newsletters, reports, publications and much more.	library, free access	https://edu.gov.ru/
Federal portal "Russian education"	A single window for access to educational resources. This portal provides access to textbooks on all areas of medicine and health care.	library, free access	http://www.edu.ru/ http://window.edu.ru/catalog/?p_rubr=2.2.81.1
Bibliographic databases			
BD "Russian Medicine"	It is created in the Central Scientific and Methodological Library and covers the entire collection, starting from 1988. The database contains bibliographic descriptions of articles from domestic journals and collections, dissertations and their abstracts, as well as domestic and foreign books, collections of institute proceedings, conference materials,	library, free access	http://www.scsml.rssi.ru/

	etc. Thematically, the database covers all areas of medicine and related areas of biology, biophysics, biochemistry, psychology, etc.		
eLIBRARY.RU	Russian information portal in the field of science, technology, medicine and education, containing abstracts and full texts of more than 13 million scientific articles and publications. The eLIBRARY.RU platform provides electronic versions of more than 2,000 Russian scientific and technical journals, including more than 1,000 open access journals.	library, free access	http://elibrary.ru/defaultx.asp
Portal Electronic library of dissertations	Currently, the Electronic Library of Dissertations of the Russian State Library contains more than 919,000 full texts of dissertations and abstracts.	library, free access	http://diss.rsl.ru/?menu=disscatalog/
Medline.ru	Medical and biological portal for specialists. Biomedical journal. Last updated February 7, 2021.	library, free access	http://www.medline.ru

3.6 . Licensed and freely distributed software used in the educational process.

I. Commercial software products		
1.	Operating system MS Windows 7 Pro	License number 48381779
2.	Operating system MS Windows 10 Pro, MS Office	AGREEMENT No. 142 A dated December 25, 2019
3.	MS Office	License number: 43234783, 67810502, 67580703, 64399692, 62795141, 61350919
4.	Kaspersky Endpoint Security for Business Advanced	Agreement No. 977/20 dated 12/24/2020
5.	1C: PROF University	LICENSE AGREEMENT No. 2191 dated 15.10.2020
6.	1C: PROF Library	LICENSE AGREEMENT No. 2281 dated 11.11.2020
II. Freely distributed software		
1.	Google Chrome	Freely distributed Distribution conditions: https://play.google.com/about/play-terms/index.html
2.	Yandex Browser	Freely distributed License Agreement for the Use of Yandex Browser Programs https://yandex.ru/legal/browser_agreement/
3.	Dr.Web CureIt!	Freely distributed License Agreement: https://st.drweb.com/static/new-www/files/license_CureIt_ru.pdf

4.	OpenOffice	Freely distributed License: http://www.gnu.org/copyleft/lesser.html
5.	LibreOffice	Freely distributed License: https://ru.libreoffice.org/about-us/license/

3.7. Resources of the information and telecommunications network "Internet" for mastering the discipline

- ✓ Amur State Medical Academy Library. Access mode:
<https://amursma.ru/obuchenie/biblioteki/biblioteka-amurskoy-gma/>
- ✓ Electronic library system "Student consultant". Access mode:
<http://www.studmedlib.ru/cgi-bin/mb4x>
- ✓ Website of the Federal Service for Supervision of Consumer Rights Protection and Population Welfare (<http://www.rospotrebnadzor.ru>).
- ✓ Website of the Ministry of Health of the Russian Federation (<http://www.rosminzdrav.ru>).
- ✓ World Health Organization website (<http://www.who.int/>).
- ✓ Website for epidemiologists (<http://www.epidemiolog.ru/>).
- ✓ Vaccination news. Vaccination. (<https://www.privivka.ru/>).
- ✓ Sanitary and anti-epidemic measures (<http://pravoteka.ru/>) legal aid portal.
- ✓ Website of the Federal Budgetary Institution of Healthcare Federal Center for Hygiene and Epidemiology of Rospotrebnadzor (<http://www.fcgsen.ru>).
- ✓ Legal reference system Consultant Plus URL: <http://www.consultant.ru>
- ✓ Medical literature (<https://www.booksmed.com/>)
- ✓ Medical portal. For students, doctors, medical books (<http://medvuz.info/>).
- ✓ Federal Electronic Medical Library (<http://www.femb.ru/>).

IV. ASSESSMENT TOOLS FUND

4.1. Current test control (input, initial), final.

4.1.1 Examples of entrance control test tasks (with standard answers)

Conducted on a single information and educational portal in the system Moodle .

Total number of tests – 50 <https://educ-amursma.ru/mod/quiz/view.php?id=8256>

1. THE DEVELOPMENT OF STAPHYLACOCAL INTOXICATION IS MOST FREQUENTLY ASSOCIATED WITH THE USE OF

- 1) cakes and pastries with custard, dairy products
- 2) dry-cured and smoked meat products
- 3) home canning
- 4) eggs

2. THE RECEPTION DEPARTMENT MUST

- 1) eliminate the possibility of crossing “clean” and “dirty” flows, ensure prevention of the development of hospital infections
- 2) ensure unimpeded movement of patients and hospital visitors
- 3) have a dining room or a meal room
- 4) have smoking areas for patients and medical staff

3. THEY CAN BE TRANSMITTED THROUGH WATER

- 1) typhoid fever
- 2) typhus

- 3) Diphtheria
- 4) measles

Answer samples: 1-1; 2-1; 3-1.

4.1.2. Examples of test tasks of the original control (with standard answers)

Conducted on a single information and educational portal in the system

Moodle .

Total number of tests – 250 <https://educ-amursma.ru/course/view.php?id=263>

1. "SPORADIC INCIDENCE" MEANS DISEASES

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

2. IN A COHORT EPIDEMIOLOGICAL STUDY, TWO OR MORE GROUPS OF PEOPLE ARE SELECTED FROM A POPULATION...

- 1) same age
- 2) same sex
- 3) same age and gender
- 4) initially free of the disease being studied

3. ANTI-EPIDEMIC MEASURES AIMED AT THE THIRD LINK OF THE EPIDEMIC PROCESS ARE CALLED

- 1) contact immunization
- 2) deratization
- 3) disinfection
- 4) isolation of patients

4. OBSERVATION IN THE EPIDEMIC FOCUS SHOULD BE ENDED AFTER

- 1) expiration of the maximum incubation period for contacts
- 2) hospitalization of the patient
- 3) final disinfection
- 4) introduction of contact immunoglobulin

5. IMMUNIZATION AGAINST TYPHOID FEVER IS SUBJECT TO

- 1) children of the first two years of life
- 2) health workers
- 3) persons traveling to endemic areas
- 4) family members of a patient with diarrhea who arrived from India or Pakistan

Answer samples: 1-1; 2-4; 3-1; 4-1; 5-3.

4.1.3. Examples of test tasks for the final assessment (with standard answers)

Conducted on a single information and educational portal in the system

Moodle .

Total number of tests 100 <https://educ-amursma.ru/mod/quiz/view.php?id=8268>

1. OBSERVATION IN THE EPIDEMIC FOCUS SHOULD BE ENDED AFTER

- 1) expiration of the maximum incubation period for contacts
- 2) hospitalization of the patient

- 3) final disinfection
- 4) introduction of contact immunoglobulin

2. ANTI-EPIDEMIC MEASURES AIMED AT THE FIRST LINK OF THE EPIDEMIC PROCESS INCLUDE

- 1) isolation of patients
- 2) personal hygiene
- 3) ongoing disinfection
- 4) immunoprophylaxis

3. A RELATIVE INDICATOR CHARACTERIZING THE FREQUENCY OR LEVEL OF PREVALENCE OF A PHENOMENON IN THE ENVIRONMENT DIRECTLY PRODUCING THIS PHENOMENON IS THE INDICATOR

- 1) intensive
- 2) extensive
- 3) ratios
- 4) clarity

4. FIRST OF ALL WHEN DIAGNOSIS OF TYPOTHESIS IN A SCHOOLCHILD IS IMPLEMENTED

- 1) emergency notification
- 2) certificate
- 3) outpatient card of the patient
- 4) exemption from school

5. SECONDARY PREVENTION INCLUDES A COMPLEX OF MEASURES AIMED AT

- 1) detection of the disease at early stages, prevention of its progression and possible complications
- 2) identification of risk factors, prevention of disease occurrence and elimination of its causes
- 3) improving the quality of life of patients with chronic diseases
- 4) prevention of the development of complications of the identified disease

Answer standards: 1-1; 2-1; 3-1; 4-1; 5-1.

4.2. Situational tasks

Task #1

Problem 24 A 74-year-old man came to a rural medical center because of an open fracture of the bones of the right forearm, received on the same day at his summer cottage. The wound was heavily contaminated. The victim underwent primary surgical treatment of the wound and was given 0.5 ml of tetanus toxoid. On the 8th day after the injury, the wound became purulent, convulsions appeared, due to which the victim was hospitalized in an infectious diseases hospital, where the diagnosis of "tetanus, generalized form" was established. There was no data on previous prophylactic vaccinations against tetanus. The patient died.

Please provide written answers to the following questions.

- 1. Assess the correctness of the emergency prevention measures taken by the traumatologist.
- 2. Specify the factors that determine the quality and effectiveness of emergency tetanus prophylaxis

Standard solution to problem #1

1. Since the doctor had no data on prophylactic vaccinations against tetanus, emergency prophylaxis had to be carried out according to the scheme described in the national vaccination calendar; a single administration of tetanus toxoid is not enough.
2. Factors that determine the quality and effectiveness of emergency tetanus prophylaxis are: age, health status, antibody level.

Problem #2

A 46-year-old truck driver was driving a man in serious condition from a village to a hospital. The patient was diagnosed with oropharyngeal diphtheria, a common form. The driver had not sought medical care in the past 26 years, only had regular medical check-ups, and was healthy. No deviations in his health were found during his examination.

Please provide written answers to the following questions.

1. Actions in relation to contact with diphtheria.
2. Does the contact require chemoprophylaxis?
3. Rules for vaccination of those in contact with diphtheria.
4. Vaccines used to prevent diphtheria.

Standard solution to problem #2

1. The contact patient is placed under daily medical observation with thermometry and examination of the oropharynx for 7 days from the moment of isolation of the source of infection. The contact patient must be examined for carriage of the diphtheria bacillus, examined by an otolaryngologist within the first 3 days and isolated from relatives who are not vaccinated against diphtheria. 72
2. Until the results of the bacteriological examination are received, the contact is observed. Chemoprophylaxis is carried out only when toxigenic diphtheria corynebacteria are cultured.
3. In adults with an unknown vaccination history, diphtheria vaccination is performed if they do not have a protective level of anti-diphtheria antibodies in their blood serum, and the immune response is checked 1–1.5 months after the vaccine is administered. If the level of anti-diphtheria antibodies after the first vaccination does not exceed a titer of 1:80 (which is observed in individuals who have not previously been vaccinated against diphtheria), then the individual is given a second vaccination and revaccination 6–9 months later. If the titer of anti-diphtheria antibodies is higher than 1:80, then the second dose of the diphtheria vaccine is not administered. Revaccinations are then administered every 10 years.
4. When vaccinating against diphtheria, it is necessary to take into account that adults should receive drugs containing a reduced amount of diphtheria antigen (ADS-M, AD-M, Imovax D.T. Adult).

Problem #3

A woman with a history of repeated miscarriages came to the antenatal clinic. Considering that rubella often leads to this, it was necessary to conduct a microbiological study.

Please provide written answers to the following questions.

1. To which group of microbes does the causative agent of rubella belong?
2. What does infection lead to in women in the first 4 months of pregnancy?
3. Epidemiology of rubella (source of infection, mechanism, factors, routes of transmission of infection).
4. Specific prevention of rubella?

Standard solution to problem #3

1. The causative agent of rubella is a virus.
2. Infection in the first 4 months of pregnancy leads to disruption of the normal development of the fetus, which leads to the development of congenital defects (cataracts, strabismus, deafness, microcephaly).
3. Source - a sick person several days before the rash and within 2 weeks after it; mechanism - blood, airborne; factors - air, blood; route - airborne, placental.

4. For the purpose of specific prevention, a live vaccine is used. Girls up to 14 years of age are vaccinated.

Problem #4

The diagnosis of "Salmonellosis" was established on March 11 in a 35-year-old woman living in the private sector, working as a cashier in a bank, hospitalized on March 11.

Family composition: husband 35 years old, engineer, son 8 years old, schoolboy, daughter 3 years old, attends preschool.

Please provide written answers to the following questions.

1. Determine the number and boundaries of epidemic foci.
2. Set a period of observation for contacts.
3. Is laboratory testing of contacts necessary?
4. Is it necessary to examine contacts by specialists?
5. Determine the need to prescribe biologically active drugs to persons in contact with the patient.

Standard solution to problem #4

1. 1 home, boundaries - house.
2. 7 days.
3. Bacteriological analysis of the daughter's stool (decreed person).
4. Contact persons are not examined by specialists.
5. Contact persons are recommended to take salmonella bacteriophage in a prophylactic dose.

Problem #5

A 28-year-old woman was bitten by a tick at her summer cottage. When examining the insect, it was found to have the tick-borne encephalitis virus. Three days had passed since the bite. When examining the patient, no deviations in her health were found.

Please provide written answers to the following questions.

1. Actions towards a bitten patient.
2. Indications for vaccination.
3. Vaccines used to prevent tick-borne encephalitis.
4. Vaccination schedule against tick-borne encephalitis in adults. 75

Standard solution to problem #5

1. The woman should be hospitalized in the infectious diseases department, and for emergency passive immunization she should be given human immunoglobulin against tick-borne encephalitis.
2. Indications for vaccination against tick-borne encephalitis are: prevention of tick-borne encephalitis in persons permanently residing in territories enzootic for tick-borne encephalitis; vaccination of persons who have arrived in these territories and are performing agricultural, irrigation and drainage, construction, soil, procurement, industrial, geological, survey, Deratization and disinfestation work ; immunization of donors for the purpose of obtaining specific immunoglobulin.
3. For the prevention of tick-borne encephalitis, the following vaccines are used: EnceVir, Tick-borne encephalitis vaccine, FSME ImmunInject, Encepur adult.
4. The primary vaccination course is carried out according to the following schedule: 1 vaccination - 0.5 ml on the selected day; 2 vaccination - 0.5 ml after 1-3 months; 3 vaccination - 0.5 ml after 5-12 months. Emergency schedule (used for the Encepur vaccine): 1 vaccination - 0.5 ml on the selected day; 2 vaccination - 0.5 ml after 7 days; 3 vaccination - 0.5 ml after 21 days.

4.3. List of practical skills that a student should have after mastering the discipline

1. Correctly collect an epidemiological anamnesis upon admission of a patient to the hospital.
2. Conduct sanitary treatment of the patient upon admission to the hospital.

3. Complete the documentation: F-060 (registration log of infectious patients), F-058 (emergency notification card for an infectious disease, food poisoning, acute occupational poisoning, unusual reaction to vaccination), F-357 (epidemiological survey card for the outbreak), F-063 (record card for preventive vaccinations), F-156 (certificate of preventive vaccinations).
4. Organize an anti-epidemic regime in the emergency room and hospital departments in order to prevent infections associated with the provision of medical care.
5. Independently prepare basic (mother) and working solutions of disinfectants.
6. Be able to work independently with disinfection equipment.
7. Conduct current and final disinfection in epidemic foci.
8. Conduct anti-pediculocidal measures when admitting patients to hospital and at home.
9. Conduct dispensary observation of patients who have recovered from infectious diseases, with the preparation of documentation (Form 30).
10. Independently carry out preventive and primary anti-epidemic measures in the outbreak area with completion of the relevant documentation (Form 357)
11. Carry out pest control yourself.
12. Conduct talks and lectures on preventive topics in institutions, schools and other educational institutions when working in the outbreak area.
13. Collect material for bacteriological and virological studies.
14. Conduct primary operational and retrospective epidemiological analysis of outbreaks in medical organizations.
15. Calculate the main intensive and extensive indicators of morbidity.
15. Work in the immunoprophylaxis office of the polyclinic and independently carry out vaccination prophylaxis, phage prophylaxis, chemoprophylaxis, seroprophylaxis, antibiotic prophylaxis. Know the documentation.
16. Work in a plague suit, carry out quarantine and observation measures for diseases that cause emergency situations in the area of sanitary and epidemiological well-being of the population and anti-epidemic measures in emergency situations.

4.4 . List of questions for the test

1. The importance of epidemiology for medicine and health care.
2. Definition of the concept of "doctrine of the epidemic process". The role of domestic scientists (L.V. Gromashevsky, V.D. Belyakov, B.L. Cherkassky) and their contribution to the theory of the doctrine of the epidemic process.
3. Ways and means of spreading the infectious agent. The concept of biological terrorism.
4. Provide a definition of the concept of an epidemiological focus. Create a plan for eliminating an anthroponotic focus.
5. Methodology for examining an epidemiological focus. Documentation.
6. Methodology of epidemiological analysis. Concept of infectious morbidity of the population (intensive and extensive indicators). Definition of the concept of lethality and mortality.
7. Characteristics of measures aimed at improving immunity.
8. The concept of "source of infection".
9. The concept of Deratization. Deratization methods.
10. Anti-epidemic measures in the center of zoonotic infection.
11. Epidemiological significance of rodents in the Amur region.
12. The main natural focal diseases of the Amur region (viral, bacterial, parasitic).
13. Disinsection. Concept. Physical and chemical methods.
14. Epidemiological significance of ticks, mosquitoes, midges, lice, flies, fleas.
15. Organization of measures to combat insects in a hospital setting.
16. Tick control measures in endemic areas. Specify the necessary means and forms.
17. Methods of treatment for pediculosis.
18. Disinfection. The concept of "current and final" disinfection.

19. Chemical methods of disinfection. Specify the recipe and methods of application.
20. Types of disinfection chambers. Operating mode.
21. Immunoprophylaxis room. Structure. Anti-epidemic operating mode. Accounting and reporting documentation.
22. Calendar of routine preventive vaccinations.
23. Live vaccines. Characteristics, features.
24. Chemical and killed vaccines. Characteristics, features.
25. Specific prevention of mumps, rubella, measles.
26. Specific and non-specific prevention of influenza.
27. Specific prophylaxis of tetanus and diphtheria.
28. Anti-epidemic measures in the outbreak of viral hepatitis A.
29. Anti-epidemic measures in the focus of hepatitis B, C. Specific prevention of hepatitis B.
30. Anti-epidemic measures in the typhoid fever outbreak. Specific prevention.
31. The concept of biological weapons. Anti-epidemic protection in the center of biological contamination.
32. Anti-epidemic measures at the site of an emergency.
33. Anti-epidemic measures in the center of HIV infection.
34. Anti-epidemic measures in the center of particularly dangerous infections (plague, cholera, yellow fever).
35. Tactics of a district physician when identifying a patient/corpse with suspected infectious diseases at home and in a clinic.
36. Tactics of the doctor on duty at the hospital emergency room when identifying a patient or suspected of having particularly dangerous infections (plague, cholera, yellow fever).
37. Anti-epidemic measures in the outbreak of dysentery.
38. Anti-epidemic measures in the center of food poisoning.
39. Anti-epidemic measures in the focus of malaria, contact viral hemorrhagic fevers.
40. Structure and purpose of the outpatient clinic's information system.
41. Anatoxins. Characteristics, features.
42. Bacteriophages. Characteristics. Methods of application and indications.
43. Serums and immunoglobulins. Characteristics. Indications for use.
44. Specific and non-specific immunity. Scheme of the immune response.
45. Preventive and anti-epidemic work in foci of helminthiasis.