The Ministry of Health of the Russian Federation

Federal State Budgetary Educational Institution
of Higher Education
"North-Western State Medical University
named after I.I. Mechnikov"
under the Ministry of Health of the Russian Federation

(FSBEI HE NWSMU named after I.I. Mechnikov under the Ministry of Health of the Russian Federation)

WORK PROGRAM OF THE ACADEMIC COURSE

"Infectious diseases"

Specialty: 31.05.01 General Medicine

Focus: Arrangement and delivery of primary health care to the adult population in medical organizations

Implementation language: Russian, English

2021

Подлинник электронного документа, подписанного ЭП, хранится в системе электронного документооборота ФГБОУ ВО СЗГМУ им. И.И.Мечникова Минздрава России
СВЕДЕНИЯ О СЕРТИФИКАТЕ ЭП
Сертификат 00CDEE3BD65A19B375D4FAEE2ABC26F298
Владелец Сайганов Сергей Анатольевич
Действителен с 03.12.2025 12:23:25 по 26.02.2027 12:23:25

The work program of the academic course "Infectious Diseases" is based on the Federal State Educational Standard of Higher Education for major 31.05.01 General Medicine, approved by the order of the Ministry of Science and Higher Education of the Russian Federation dated August 12, 2020 No. 988 "On approval of the federal state educational standard of higher education – in major 31.05.01 General Medicine".

***Compilers of the work program of the academic course*:**
M.V. Klur, Associate Professor of the Department of Infectious Diseases of FSBEI HE NWSMU named after I.I. Mechnikov, C.M.Sc.

***Reviewer*:**
D.A. Lioznov, Acting Director of the FSBI "Smorodintsev Research Institute of Influenza" under the Ministry of Health of the Russian Federation, Head of the Department of Infectious Diseases and Epidemiology of FSBEI HE "The Pavlov First Saint Petersburg State Medical University" under the Ministry of Health of the Russian Federation, Doctor of Medical Sciences

The work program of the academic course was discussed at the meeting of the Department of Infectious diseases

April, 05, 2021, Protocol No. 7

Head of the Department _____ /Lobzin Yu.V./
(Signature) (Full name)

Approved by the Methodological Commission in major 31.05.01 General Medicine
on May 11, 2021

Chairman _____ / Bakulin I.G./
(Signature) (Full name)

Reviewed by the Methodological Council and recommended for approval by the Academic Council
on May 20, 2021

Chairman _____ / Artyushkin S.A. /
(Signature) (Full name)

Updated:

CONTENT

1. Aim of mastering the academic course 4

2. Place of the academic course in the structure of the educational program 4

3. List of planned course outcomes correlated with program outcomes 4

4. Scope of the academic course and types of academic work 8

5. Content of the academic course, structured with units (topics) including the amount of academic hours and session types 8

6. Guidelines for students on mastering the academic course 39

7. Assessment materials 41

8. List of necessary educational literature and Internet resources to master the academic course 41

9. List of information technologies used to master the academic course, including a list of software, professional databases and information reference systems 42

freely distributed software of domestic production 43

10. Logistical and technical support 43

"passed with distinction" 58

5 58

"passed with credit" 58

4 58

1. Aim of mastering the academic course

Aim of mastering the academic course "Infectious diseases" is the development of student's competency to be able and ready to work independently with infectious case patients in the field of health care.

2. Place of the academic course in the structure of the educational program

The academic course "Infectious diseases" belongs to the indispensable part of Block 1 "Courses (modules)" of the basic professional educational program for major 31.05.01 General Medicine (educational level: specialist's degree), focus: Arrangement and delivery of primary health care to the adult population in medical organizations. The academic course is obligatory.

3. List of planned course outcomes correlated with program outcomes

Code and name of the competency	Code and name of the competency achievement indicator
GPC-7 Student is able to prescribe treatment and monitor its effectiveness and safety	AI-1 GPC-7. Student prescribes therapeutic-protective regimen, selects the place and type of treatment, taking into account the severity of the patient's condition AI-2 GPC-7. Student carries out the selection of medicines, selection of a specific formulation, administration modes, and rational substitution of medications based on the patient's condition AI-3 GPC-7. Student predicts side effects of medications and performs their prevention AI-4 GPC-7. Student monitors the effectiveness and safety of the prescribed treatment at all stages of its implementation.
PC-1 Student is able to arrange and deliver medical care to patients in urgent or emergency cases	AI-1 PC-1. Student identifies and delivers urgent medical care for sudden acute diseases, conditions, exacerbation of chronic diseases without an obvious threat to the patient's life within primary health care . .
PC-2 Student is able to conduct an examination of the patient in order to identify the main pathological conditions, symptoms, disease syndromes, and nosological forms	AI-1 PC-2.1. Student carries out a survey and examination of the patient (collection of complaints, the patient's medical history, examination, palpation, percussion, auscultation) AI 2 PC-2.2. Student states a preliminary diagnosis, draws up a plan and directs the patient for laboratory and/or imaging tests if there are medical in accordance with the current procedures, clinical guidelines and standards of health care AI-3 PC-2.3. Student refers the patient to medical specialists for consultation and/or for the specialized health care in inpatient or outpatient settings, if there are medical grounds in accordance with the current

	procedures, clinical guidelines and standards of health care AI-4 PC-2.4. Student performs differential diagnosis with other diseases/conditions AI-5 PC-2.5. Student determines a diagnosis based on clinical classifications and the current International Statistical Classification of Diseases and Related Health Problems (ICD)
PC-3 Student is able to manage and treat patients in need of the healthcare delivery	AI-1 PC-3.1. Student develops a plan and prescribes non-medicinal and medicinal treatment of patients, taking into account the diagnosis, age and clinical aspect in accordance with the current procedures, clinical guidelines and standards of health care AI-2 PC-3.2. Student evaluates the effectiveness and safety of the use of medications, medical devices and therapeutic nutrition and other treatment methods in primary health care
PC-6 Student is able to implement a set of measures aimed at preserving and strengthening public health	AI-1 PC-6.1. Student develops and implements measures aimed at sanitary and hygienic education of the population AI-2 PC-6.2. Student prescribes preventive measures to patients, taking into account risk factors, for the prevention and early detection of diseases, including socially significant diseases AI-3 PC-6.3. Student arranges and controls the immunoprophylaxis of infectious diseases in the adult population AI-4 PC-6.4. Student conducts anti-epidemic services, arranges preventive measures aimed at control infectious transmission in the infectious outbreak, according to the adopted regulations

Competency achievement indicator code	Study outcomes (assessment criteria)	Assessment means
AI-1 GPC-7	**Student knows** the main therapeutic and protective regimens and types of treatment	Control questions, case tasks, tests
	Student is able to assess the severity of the condition and prescribe a therapeutic and protective regime, choose a place of treatment	
	Student has the skill of assessing the condition severity, choosing the place of treatment and prescribing a therapeutic and protective regimen	
AI-2 GPC-7	**Student knows** the main drug groups used in infectious pathology and their administration modes	Control questions, case tasks, tests
	Student is able to select medicines and determine their administration modes, taking into account the patient's condition	
	Student has the skill of selecting medicines and determining their administration modes	
AI-3 GPC-7	**Student knows** the main side effects of medicines used in the treatment of infectious diseases	Control questions, case tasks, tests
	Student is able to prevent the main side effects of	

	medicines used in the treatment of infectious diseases	
AI-4 GPC-7	**Student knows** the main medications, their dosage, modes of administration, regimens and side effects	Control questions, case tasks, tests
	Student knows how to identify the effectiveness and safety of treatment	
AI-1 PC-1	**Student knows** the main complications of infectious diseases and acute life-threatening conditions that occur in infectious diseases; patterns of emergency healthcare delivery	Control questions, case tasks, tests
	Student is able to identify the main complications of infectious diseases and acute life-threatening conditions that occur in infectious diseases	Control questions, case tasks, tests
AI-1 PC-2.1.	**Student knows** the procedure of collecting the medical history and physical examination of the patient	Control questions, case tasks, tests
	Student is able to collect the medical history, conduct physical examination (examination, palpation, auscultation, blood pressure measurement, etc.); interpret survey data to identify the leading syndromes and to state a preliminary diagnosis	
	Student has the skill of collecting the medical history	
AI-2 PC-2.2.	**Student knows** modern methods of clinical, laboratory, instrumental (including endoscopic, X-ray methods, ultrasound diagnostics) and pathoanatomical studies	Control questions, case tasks, tests
	Student is able to interpret survey data to identify the leading syndromes and to state a preliminary diagnosis; determine the necessary minimum of appropriate studies; interpret the data of laboratory and imaging tests, including pathoanatomical study	
	Student has the skill of stating a preliminary diagnosis and determining the necessary minimum of appropriate studies; the skill of interpreting laboratory and imaging tests data, including pathoanatomical study	
AI-3 PC-2.3	**Student knows** clinical guidelines on the health care delivery with consideration to the standards of health care	Control questions, case tasks, tests
	Student is able to identify the indications for referring a patient to medical specialists for consultation	
	Student has the skill of identifying indications for referring a patient to medical specialists for consultation	
AI-4 PC-2.4	**Student knows** the etiology and pathogenesis of the main infectious diseases; clinical aspect, the course features and the most common complications of infectious and parasitic diseases; the main infectious symptoms and syndromes	Control questions, case tasks, tests
	Student is able to group symptoms into syndromes, identify the specific leading syndromes in infectious diseases	
	Student has the skill to identify the leading symptoms and syndromes	
AI-5 PC-2.5	**Student knows** the diagnosis criteria of various infectious and parasitic diseases; standardized patterns	Control questions, case tasks, tests

	of infectious diseases diagnosis and treatment (ICD, etc.)	
	Student is able to implement patterns of stating a diagnosis (primary, secondary, complications), taking into account the International Statistical Classification of Diseases	
	Student has the skill of stating a diagnosis (primary, secondary, complications) in accordance with the International Statistical Classification of Diseases	
AI-1 PC-3.1	**Student knows** the main drug groups used in the treatment of infectious diseases; treatment regimens for infectious and parasitic diseases	Control questions, case tasks, tests
	Student is able to prescribe medicinal treatment regimens, immunomodulatory therapy for various infectious and parasitic diseases in people of different age groups	
	Student has the skill of prescribing common and immunomodulatory medications for various infectious and parasitic pathologies, taking into account the patients' age	
AI-2 PC-3.2	**Student knows** the administration modes, indications and contraindications for prescribing the main medications used in the treatment of infectious diseases	Control questions, case tasks, tests
	Student is able to identify indications, contraindications and administration modes of the main medications used in the treatment of infectious diseases	
	Student has the skill of determining the administration modes and indications for the appointment of the main medications used in the treatment of infectious diseases	
AI-1 PC-6.1	**Student knows** the arrangement patterns of preventive measures to control infectious diseases among the population; patterns and methods of conducting sanitary and educational work among the population to prevent infectious diseases and promote a healthy lifestyle	Control questions, case tasks, tests
	Student is able to identify risk factors of main infectious diseases; to carry out preventive, hygienic and anti-epidemic measures; to carry out preventive measures to increase the body's resistance to various infections by the means of healthy nutrition, physical education, cold training, and healthy lifestyle promotion	
	Student has the skill of carrying out preventive measures to control infectious diseases; conducting sanitary and educational work to promote a healthy lifestyle and rejection of bad habits	
AI-2 PC-6.2.	**Student knows** the epidemic process, the epidemiology of particularly significant infectious and parasitic diseases, and the implementation of anti-epidemic measures	Control questions, case tasks, tests
	Student is able to carry out anti-epidemic services and protect the population in the focus of socially significant infections; use collective and personal protective equipment	
	Student has the skill to carry out anti-epidemic services and protect the population in the focus of socially significant infections: to use collective and personal protective equipment	

AI-3 PC-6.3	**Student knows** the patterns of active and passive immunization	Control questions, case tasks, tests
	Student is able to carry out preventive services to control the incidence rate of infectious and parasitic diseases (physical education, cold training, nutrition, hygiene measures, immunization)	
	Student has the skill of carrying out preventive services to control the incidence rate of infectious diseases; carrying out sanitary and educational work to promote a healthy lifestyle (physical education, abstinence from drugs, alcohol, smoking, etc.)	
AI-4 PC-6.4	**Student knows** the major anti-epidemic measures aimed at preventing the infection transmission	Control questions, case tasks, tests
	Student is able to carry out major anti-epidemic measures aimed at preventing the infection transmission	
	Student has the skill of using personal protective equipment (gloves, masks).	

4. Scope of the academic course and types of academic work

Type of academic work	Labor intensity	Semesters	
		10	11
Students and teacher cooperative work	**196**	**60**	**136**
Classroom work:	192	48	132
Lectures (L)	48	12	36
Practical sessions (PS)	144	48	96
Individual study:	**128**	**48**	**80**
under the theoretical run	96	48	48
preparation for exam	32	-	32-
Interim assessment: exam (taking the exam and group consultations included)	**4**		**4**
Total labor intensity: academic hours	**324**		
credit units	**9**		

5. Content of the academic course, structured with units (topics) including the amount of academic hours and session types

5.1. Content of the academic course units

Sl.No.	Name of the academic course unit	Annotated content of the academic course unit	The list of competencies being developed in the process of mastering the topic
1	General issues of infectious pathology	Introduction to the problem of infectious diseases. The place of infectology in human pathology and the health care system. The general pathology of infectious diseases. Diagnostic patterns for infectious diseases. Treatment patterns of infectious patients. Rehabilitation and follow-up care. Preventive patterns of infectious diseases. Arrangement of	GPC-7; PC-2; PC-3; PC-6

		the infection service. IDC. The regimen and structure of the infectious diseases unit.	
2	Specific issues of infectious pathology	Non-invasive and invasive intestinal infections (shigellosis, yersiniosis, pseudotuberculosis, etc.) Food-borne toxicoinfections, botulism Especially Dangerous Infections (cholera, plague, anthrax, smallpox) Meningococcal disease Diseases associated with tonsillitis syndrome (diphtheria, scarlatina, acute tonsillitis) Sepsis Protozoal invasions (amoebiasis. balantidiasis, giardiasis) Influenza. URTI Herpes virus infections: herpes simplex, chickenpox, herpes zoster, infectious mononucleosis Viral hepatitis (A, B, C, D,E) HIV infection and opportunistic diseases Viral diarrhea Tick-borne infections (tick-borne encephalitis, Lyme borreliosis) Helminthiasis Clinical forms and complications of tuberculosis	GPC-7; PC-2; PC-3; PC-6
3	Differential diagnosis of infectious diseases	Differential diagnosis of intestinal infections; Differential diagnosis of jaundice; Differential diagnosis of meningitis; Differential diagnosis of pneumonia; Differential diagnosis of lymphadenopathy; Differential diagnosis of fever; Differential diagnosis of tonsillitis; Differential diagnosis of emergency conditions	GPC-7; PC-2; PC-3; PC-6

5.2. Topical lecture plan

Sl. No.	Name of the academic course unit	Topics of lectures	Active forms of study	Labor intensity (academic hours)
1	General issues of infectious pathology	L1 INTRODUCTION TO THE PROBLEM OF INFECTIOUS DISEASES. THE PLACE OF INFECTOLOGY IN HUMAN PATHOLOGY AND THE HEALTHCARE SYSTEM. THE GENERAL PATHOLOGY OF INFECTIOUS DISEASES. Definition and essence of the concepts: infectious process, infectious disease, exogenous, endogenous infections, concurrent infection, mixed infection, superinfection, reinfection, nasocomial infection. Ecology and infectious incidence rate. The role of micro and macroorganisms in the development of infectious process: the main patterns of interaction between the macroorganism and various	-	2

		infectious agents (bacteria, viruses, protozoa); the possible immune responses and the development of various pathophysiological effects (DIC syndrome, acidosis, hypoxia, electrolyte disturbances, etc.) under the influence of infectious agents. Types of the infectious process: acute, chronic, clinical, inapparent, subclinical, fulminant, persistence, latency, slow infection. The place of infectious diseases in human pathology: infectious prevalence rate in the world and the Russian Federation; mortality from infectious diseases; the role of infectious agents in the development of somatic pathology; "emerging infectious diseases", "re-emerging infectious diseases"		
		SALMONELLOSIS Salmonellosis: gastrointestinal type, generalized type Definition. Etiology. Salmonellosis pathogens and their most important properties. Classification and classification fundamentals. Stability in the external environment. Epidemiology. Prevalence of salmonellosis among humans and animals. Importance of salmonellosis prevalence in cattle, poultry, and pigs in the infection transmission. Lifetime and postmortem infectious contamination of meat products. Human as a source of infection. Infectious transmission routes, salmonellosis transmission routes. Vulnerability. Immunity. Sporadic incidence and group outbreaks. Nosocomial outbreaks. Seasonality. Pathogenesis, pathological anatomy. Pathogenesis of localized and generalized salmonellosis Pathogenetic mechanisms of secretory diarrhea, systematic toxic syndrome, hypovolemic, toxic shock syndrome. Morphological changes in the intestine and other organs in various types of the disease. The formation of pyemic foci in the septic type of the disease. Clinical aspect. Salmonellosis classification. Latent period. Symptoms and course of clinical forms of the gastrointestinal type. The leading importance of the gastroenteric type. Severity criteria with reference to the toxicosis intensity and the degree of dehydration. - Clinical aspect of generalized form of the disease (typhus-like and septicopyemic types). Bacterial carrying (acute, chronic, transient). Complications: hypovolemic and toxic shock syndrome. Prognosis. Diagnostics. The crucial importance of epidemiological and laboratory data. Laboratory diagnostics: bacteriological (seeding of vomiting matters, gastric lavage, feces, urine, bile, blood) and serological (HAI, ELISA, IIF). Express diagnostics using coagglutination test, immunofluorescence method and HAI with immunoglobulin diagnostic agents. Differential diagnosis. Treatment. Indications of mandatory hospitalization. Indications, arrangement and treatment program for patients at home. Regimen, diet. The crucial importance of pathogenetic rehydration therapy of the		

		gastrointestinal type, aimed at normalizing water-salt metabolism, detoxification, control of hypoxia, metabolic acidosis, and maintaining cardiovascular activity and kidney function. Oral and intravenous rehydration therapy. Stages of infusion therapy. Calculating infusion volume and rate for polyionic solutions. Complications of infusion therapy. Tactics of antibacterial therapy in generalized type. Systematic treatment. Sanitation of bacterial carriers. Methods of emergency therapy and resuscitation in hypovolemic and toxic shock syndrome. Prevention. Veterinary-sanitary, sanitary-hygienic and anti-epidemic services and measures. Typhoid fever, paratyphoid A and B Definition. Etiology. The pathogen, its main properties, and antigenic structure. L-forms of the pathogen. Factors contributing to the L-transformation of the pathogen. Stability of the pathogen in the external environment. Epidemiology. Sources of infection. The importance of chronic bacterial carriers in the transmission of typhoid fever. Infection mechanism. Routes and factors of infectious transmission. Sporadic cases. Food and water-born outbreaks. Seasonality. Population vulnerability. Immunity. Pathogenesis, pathological anatomy. Pathogen entry and reproduction in gut-associated lymphoid tissue, lymph nodes; intracellular parasitization within the MPS leading to generalized involvement; bacteremia, toxinemia. Focal lesions. Allergic reactions. Pathogenesis of relapses. Formation of chronic bacterial carriage (A.F. Bilibin). The role of pathogen L-forms in the pathogenesis of relapses and chronic bacterial carriage. Cyclical nature of pathological changes in the lymphoid system of the small intestine. Changes in other organs and systems. Clinical aspect. Clinical classification. Latent period. The cyclical course of typhoid fever. Latent period variants of modern and classical typhoid fever. Features of the modern clinical course of typhoid fever. Clinical profile of the peak period of the disease. Types of temperature curves. Timing of the specific rash appearance. Disorders of the central nervous and cardiovascular systems. Signs of the gastrointestinal tract damage. Severity criteria of typhoid fever. "Status typhosus" as a manifestation of the severe course of the disease. Dynamics of hematological changes. Exacerbations and relapses of typhoid fever. The course of typhoid fever in vaccinated people. Complications. Prognosis. Diagnostics. The role of epidemiological and clinical data. Hemogram and coagglutination. Laboratory diagnostics: bacteriological (obtaining and studying hemo-, copro-, urino-, bili-, roseola-, and myelocultures) and serological (Widal test, HAI with erythrocyte diagnostic agents O, H, and Vi). Immunofluorescence method in the rapid diagnosis of		

		infection. Determination of pathogen antigens in the blood by enzyme immunoassay and the aggregate hemagglutination test, and in the stool and blood by coagglutination tests. Selection of optimal laboratory diagnostic methods in different disease stages. Differential diagnosis. Treatment. The importance of regimen, nursing, and diet therapy, including at the pre-hospital stage. Mandatory hospitalization. Patterns and means of antibiotic therapy. Means of pathogenetic therapy and indications for their use. Emergency treatment for complications of typhoid fever. Immunomodulatory therapy within relapses prevention. Prevention. Early detection and sanitation of infection sources, suppression of transmission routes and immunity improvement. Specific prevention. Fundamentals of follow-up care for convalescents. Paratyphoid A and B Etiology, epidemiology, pathogenesis; similarities and differences in comparison with typhoid fever. Clinical aspect. The main clinical symptoms of paratyphoids A and B. Features of the paratyphoid course in comparison with typhoid fever. Complications. Prognosis. Diagnostics. The decisive importance of laboratory (bacteriological and serological) diagnostics. Clinical and epidemiological diagnostics. Treatment. The importance of regimen, nursing, and diet therapy. Patterns and means of antibiotic therapy		
2		L2. INVASIVE INTESTINAL INFECTIONS SHIGELLOSIS Definition. Etiology. The pathogen and its main properties. Modern classification of Shigella. Stability of the pathogen in the external environment. Epidemiology. Sources of infection. The role of inapparent, subclinical and mild cases in dysentery transmission. Infection mechanism. Routes and factors of infectious transmission. Optimal transmission routes of different types of Shigella. Vulnerability of different age groups. Immunity. Seasonality. Pathogenesis, pathological anatomy. Portal of entry. The role of pathogen adhesive, invasive and toxigenic features. The role of dysbacteriosis in the disease pathogenesis. The importance of the premorbid background and the macroorganism state for the disease course. Mechanism of colitis development, the nature of damage to the mucous membrane of the colon. Pathological changes in internal organs. Peculiarities of the gastroenteric and gastroenterocolytic pathogenesis. Clinical aspect. Clinical classification of dysentery. Latent period in different clinical forms of the disease. Specification of colitic, gastroenterocolytic and gastroenteritic types of acute dysentery. Subclinical course of dysentery (bacterial carriage). Protracted course. Course severity criteria. Severe course of the	-	2

		disease with significant damage to the intestinal mucosa. Complications of dysentery, post-dysentery conditions. - Chronic dysentery and its types. Conditions conducing to the development of chronic dysentery. Prognosis. Diagnostics. The importance of the epidemiological history and clinical examination of the patient. Bacteriological and serological studies (HAI with erythrocyte dysentery diagnostic agent, co-agglutination test, latex agglutination, ELISA, IIF methods). Coprology and rectoromanoscopic method. Indications for rectoromanoscopy. Express diagnostics using coagglutination test, immunofluorescence method and HAI with immunoglobulin (antibody) diagnostic agents. Differential diagnosis. Treatment. Indications for mandatory hospitalization. Indications, arrangement of home treatment program. Regimen. Diet therapy. Tactics of etiotropic treatment of patients with colitic acute dysentery. Antibacterial therapy agents (antibiotics, derivatives of nitrofuran, fluoroquinolones, nalidixic acid, etc.). Sulfanilamides and their combinations with other medications. The use - of bacterial biological medications. Enterosorption and gastrointestinal adsorbents. Pathogenetic and symptomatic therapy. Special aspects - of severe form treatment. Treatment tactics for gastroenterocolitic and gastroenteritic types. Rehydration therapy and its stages. Oral and intravenous rehydration. Treatment of chronic dysentery. The importance of immunocorrecting and general strengthening therapy. The importance of disbacteriosis treatment. Hospital discharge rules. Rehabilitation of convalescents. Prevention. The role of early case detection and appropriate treatment in the hospital and at home. Current and final disinfection. Sanitary and hygienic services. Nonspecific resistance improvement. Follow-up care for convalescents within the infectious diseases rooms of outpatient hospitals.		
3		L3 FOOD-BORNE TOXICOINFECTIONS Definition. Etiology, Significance of opportunistic microorganisms: staphylococcus, proteus, enterococcus, Klebsiella, Citrobacter, sporous microbes and anaerobes, halophilic vibrions, associations of opportunistic bacteria in the occurrence of toxic infections. Epidemiology. Sources of food-borne toxicoinfections, transmission mechanism. Infected food as an essential transmission factor. The role of various foods in the transmission of toxic infections. Sporadic cases and group outbreaks. Seasonality. Features of the epidemiology of staphylococcal toxicoinfections. Pathogenesis, pathological anatomy. The role of the toxigenic features of pathogens during their accumulation in food. Pathogenetic mechanism of secretory diarrhea, systematic toxic syndrome, and cardiovascular disorders in foodborne toxicoinfections. Clinical aspect. Latent	-	2

		period. Clinical classification and the cyclical course of the disease with predominant lesions of various parts of the gastrointestinal tract. The leading importance of the gastroenteric type. Severity criteria, with reference to the toxicosis intensity and the degree of dehydration. Features of the symptoms of food-borne toxicoinfections caused by various pathogens. Complications. Prognosis. Diagnostics. The role of epidemiological history and clinical examination of patients. Syndromic diagnostics. The importance of the bacteriological diagnostic method, HAI, coagglutination test. Serological tests with auto-strains of pathogens. Differential diagnosis. Treatment. Indications of mandatory hospitalization. Indications, arrangement and treatment program at home. Regimen. Pathogenetic rehydration and detoxification therapy as the main method of treating patients with food-borne infections. Oral and infusion rehydration therapy, its stages. Calculating infusion volume and rate for polyionic solutions. Gastric lavage tactics. Doctor's tactics in relation to antibacterial therapy. Prevention. The primary importance of sanitary and hygienic services. BOTULISM Etiology. Specification of the main properties of the pathogen. Types of pathogen. Stability of microbes and toxins in the external environment. Epidemiology. Sources and transmission factors of botulism. Increased risk of using home-made canned food. Vulnerability. Immunity. Sporadic and group diseases. Pathogenesis, pathological anatomy. The crucial importance of botulinum toxin in the disease development. Toxinemia. The mechanism of damage to the central and peripheral nervous system. Pathogenesis of acute respiratory failure. Pathological changes in internal organs. Clinical aspect. Latent period. Symptoms of the latent period. Syndromes: paralytic, dyspeptic, general toxic. Bulbar disorders. Severity criteria. Acute respiratory failure. Complications. Prognosis. Diagnostics. The importance of epidemiological, clinical, and laboratory data. Laboratory study of foods, vomiting matters, gastric lavage, feces, blood and urine to detect the pathogen and (or) botulinum toxin. Biological assay. Differential diagnosis. Treatment. Specific therapy with anti-botulinum serum, its methodology. Preliminary desensitization. Administration of anatoxin to stimulate immunogenesis. Detoxification therapy, symptomatic treatment. Antibiotic therapy. Methods of intensive therapy of respiratory disorders. Prevention. The role of sanitary supervision and health education. Explanation to the public the rules of home canning of products. Seroprophylaxis in the focus of botulism. Prophylactic vaccination (polyanatoxin) and indications for it.		

4		L4. ESPECIALLY DANGEROUS INFECTIONS Definition. Etiology. Classic vibrio cholerae and El Tor vibrio. Their most important properties and specification of toxins. Vibrio serotypes. Serovariant 0139 of vibrio cholerae. Stability of vibrio cholerae in the external environment. Information about halophilic pathogenic vibrios. Epidemiology. Sources of infection. Infection mechanism, routes and factors of transmission. The predominant importance of the water-borne transmission. Factors contributing to the cholera transmission. Vulnerability of population. Immunity. Seasonality. Epidemics and pandemics of cholera. New data on the possibility of cholera carriage and transmission from bordering countries, in the presence of significantly expanded trade and economic ties. Features of the epidemiology of El Tor cholera. Patterns of epidemic development caused by 0139 vibrio - cholerae serovar. Pathogenesis, pathological anatomy. Pathogen entry and reproduction. The effect of cholerogen toxin on the enzyme systems of small intestine cells. Pathogenesis of diarrhea, water-electrolyte disorders, metabolic acidosis, cardiovascular disorders, kidney function disorders. Pathogenesis of hypovolemic shock. Pathological - changes in internal organs. Clinical aspect. Classification of cholera (according to the degree of dehydration). Latent period. Early symptoms of cholera. Specification of particular disease stages. Clinical and pathogenetic specification of the four degrees of dehydration. The course variants of cholera. Clinical features of El Tor cholera. Clinical features of cholera caused by serovar 0139. Clinical aspect of hypovolemic shock. Complications. Prognosis. Diagnostics. The essential importance of the epidemiological history and clinical examination of the patient. Bacteriological diagnosis (cultures of feces, vomiting matters, bile, autopsy specimens). Express diagnostic methods. Modern methods of pathogen detection based on polymerase chain reaction (PCR) and detection of ...-gene in obtained cultures using DNA - probing. Information on the variability of the main properties of vibrio cholerae obtained in recent years (resistance to diagnostic phages, antibiotics, etc.). Rules for taking, forwarding, and studying the material. Differential diagnosis. Treatment. Pathogenetic therapy with considerastion to dehydration of the patient. Stages of oral and infusion rehydration. Solutions for oral and infusion rehydration. Means of pathogenetic therapy. Methods of monitoring the therapy effectiveness. Complications of infusion therapy. Antibiotic therapy of cholera patients and vibrio carriers. Hospital discharge rules/Prognosis.	-	2
5		L5 TETANUS, RABIES Definition. Ethnology. The most important properties of the pathogen. Ability to toxin and spore formation. Stability in the external environment.	-	2

		Epidemiology. Spread of the tetanus causative agent in nature. Sources of infection. Infection mechanisms. Correlation between incidence and injury rate. Risk groups. Tetanus in war and peacetime. Immunity. Pathogenesis, pathological anatomy. Portal of entry. Formation of the infectious focus. Toxinemia. Breaking the blood-brain barrier by toxins. Selective effect of the toxin on various structures of the nervous system. Mechanisms of convulsive syndrome. Stem intoxication. Respiratory disorders. Metabolic disorders. Clinical aspect. Classification of tetanus. Latent period. Prodromes. Symptoms of latent period. Clinical aspect of the eruptive stage. Criteria and forms of severity. Local type of tetanus. Complications. Prognosis. Diagnostics. Leading diagnostic value of the clinical symptom complex. Differential diagnosis. Treatment. Delivery of emergency medical care at the pre-hospital stage. Arranging a complete rest regimen. Features of specific and etiotropic tetanus therapy. Administration of antitetanic serum, antitetanic globulin, anatoxin. Preliminary desensitization. Pathogenetic therapy aimed at maintaining vital body functions: treatment of convulsive syndrome, hyperthermia, acidosis, apnea crisis. Treatment methods in the intensive care units. Prevention and treatment of complications. The importance of rational care and nutrition. Prevention. Methods of general, surgical and specific prevention. Use of tetanus toxoid and antitetanic serum. Planned and emergency prevention. RABIES Definition. Etiology. The main properties of the rabies virus, resistance in the external environment. Epidemiology. Viral sources and reservoirs in nature. Epizootics among wild and domestic animals. Human infection routes. Importance of the portal of entry. Pathogenesis, pathological anatomy. Entry and spread of the virus. Damage to the central nervous system. Histomorphological changes in the medulla oblongata, cerebellum, spinal cord, and sympathetic ganglia.- Babes-Negri bodies. Clinical aspect. Latent period. Stages of the disease course. Early symptoms of rabies. The course of the disease. Atypical types of rabies. Prognosis. Diagnostics. The importance of clinical and epidemiological data and the detection of Babes-Negri bodies in the brains of dead animals. Use of a biological sample. Differential diagnosis. Treatment. Nursing, symptomatic therapy. Prevention. Control of the source of infection. Sanitary and veterinary services. Specific prevention by the active-passive method. The use of anti-rabies gamma globulin. Populations with an increased risk of rabies infection. Indications for vaccination and methods of its implementation. Specifications of vaccines and their		

		effectiveness. Complications of vaccination.		
6		L6. MENINGOCOCCAL DISEASE Definition. Etiology. The pathogen and its main properties. Serological groups and types of meningococcus. Epidemiology. Sources of infection. The role of meningococcal carriers in transmission of the disease. Infection mechanism and transmission routes. Vulnerability of population. Risk groups. Immunity. Frequency of epidemic outbreaks, seasonality. Prevalence. Pathogenesis, pathological anatomy. Pathogen entry. Hematogenous and lymphogenic generalization of infection. Breaking the blood-brain barrier. The role of toxinemia and the allergic agent in pathogenesis. Development mechanism of toxic shok syndrome, cerebral hypertension and hypotension, the brain swelling and cerebal edema, DIC syndrome and adrenal crisis (Waterhouse–Friderichsen syndrome). Clinical aspect. Classification of meningococcal infection types. Latent period. Clinical aspect of meningococcal nasopharyngitis, meningococcal meningitis, meningococcemia. The nature of skin eruptions. Meningococcal meningoencephalitis. Waterhouse-Friderichsen syndrome. Features of the clinical course of the disease in children. Complications. Clinical syndromes: toxic shock syndrome, adrenal crisis, the brain swelling and cerebal edema. Outcomes. Prognosis for various types of meningococcal infection. Diagnostics. The importance of epidemiological data in the recognition of localized and subclinical types. The role of clinical examination in diagnosis of various meningococcal infection types. Bacterioscopic and bacteriological detection of pathogens in nasopharyngeal mucus, blood, and cerebrospinal fluid. Serological diagnostic methods. The importance of cerebrospinal fluid analysis in the diagnosis of meningitis. Differential diagnosis. Treatment. Urgent antibiotic treatment at the pre-hospital stage. Combined etiotropic and pathogenetic therapy and its arrangement in specialized departments and centers. Patterns and tactics of antibiotic therapy. Antibiotic options. The effectiveness criteria of antibiotic therapy. Methods and means of pathogenetic therapy of various meningococcal infection. Treatment of toxic shock syndrome and adrenal crisis. Prevention. Emergency prevention of the disease, identification and sanitation of meningococcal carriers. Prospects for specific prevention.	-	2
7	Specific issues of infectious pathology	L.1 INFLUENZA AND OTHER ACUTE RESPIRATORY DISEASES General clinical, etiological and epidemiological specifications of acute viral respiratory diseases. Modern classification of acute viral respiratory diseases. The need for early clinical and epidemiological	-	2

		diagnosis of influenza and its differentiation from the other ARIs. INFLUENZA Definition. Etiology. Modern understanding of the pathogen, its properties, antigenic structure and variability. Modern understanding of the antigenic variability mechanisms of the influenza virus. Antigenic variants. Pandemic and epidemic strains of the virus. Epidemiology. Sources of infection. Influenza infection mechanism and transmission routes. Vulnerability. Immunity. Prevalence. Seasonality. Epidemics and pandemics of influenza. Possibility to predict influenza epidemics. Pathogenesis, pathological anatomy. Virus entry and reproduction in the cells of the columnar epithelium of the respiratory tract. Changes in the mucous membrane of the respiratory tract. The role of viremia and toxemia in the development of generalized microcirculation disorders underlying damage to the cardiovascular, nervous systems and parenchymal organs. The significance of secondary infection. Clinical aspect. Clinical classification of influenza. Latent period. Clinical aspect of uncomplicated influenza types with mild, moderate and severe course. Severity criteria of influenza. Features of influenza course in children and the elderly. Early viral and bacterial pneumonia, features of their course. Post-influenza bacterial pneumonias, features of their course in senile people. Other respiratory complications. Complications associated with deep dyscirculatory changes and hemorrhages in parenchymal organs. Distinctive complications from the nervous system. Prognosis. Diagnostics. The importance of clinical and epidemiological data. Differential diagnosis. Treatment. Indications for hospitalization. Home treatment program. Prevention. Anti-epidemic measures. Specific prevention of influenza. PARAINFLUENZA Definition. Etiology. The parainfluenza causative agent and its most important properties. Antigenic stability of the parainfluenza virus. Epidemiology. Sources of infection. Infection mechanism and transmission routes. Vulnerability. Immunity. Population morbidity. Sporadic cases and epidemic outbreaks. Seasonality. Pathogenesis, pathological anatomy. Primary viral involvement of the nasal, laryngeal, and tracheal mucosa. The importance of viremia in the pathogenesis of parainfluenza. Mechanism of laryngostenosis development in parainfluenza. Clinical aspect. Differential diagnosis.		

		Treatment. Indications for hospitalization. Home treatment program. Regimen. Pathogenetic and symptomatic therapy. Indications for etiotropic therapy. Emergency treatment for laryngostenosis. Prevention. Early isolation of the patient. Individual prophylaxis. ADENOVIRUS INFECTION Definition. Etiology. Pathogens, their serotypes and basic properties. Stability in the external environment. Epidemiology. Sources of infection. Means of virus isolation from the patient's body. Infection mechanism and transmission routes. Vulnerability. Immunity. Seasonality. Prevalence. Pathogenesis, pathological anatomy. Virus entry, localization, and reproduction in the epithelium of the respiratory tract, eyes, and intestines. Hematogenous virus dissemination. The importance of viremia in the pathogenesis. Lymphatic system involvement. Changes in the mucous membranes and internal organs. Clinical aspect. Diagnostics. Differential diagnosis. Treatment. Indications for hospitalization. Home treatment program. Pathogenetic and symptomatic therapy. Emergency treatment for laryngostenosis. Prevention. Anti-epidemic measures. Individual prophylaxis. RESPIRATORY SYNCYTIAL INFECTION Definition. Etiology. The causative agent of RS infection and its most important properties. Epidemiology. Sources of infection. Mechanism of lesion and transmission routes. Vulnerability. Sporadic and epidemic morbidity. Immunity. Pathogenesis, pathological anatomy. Predominant viral involvement of the lower respiratory tract mucosa. Features of the bronchial and alveolar epithelial lesions. Clinical aspect. Latent period. The initial symptoms of the disease. Asthmatic syndrome. Bronchitis, bronchiolitis, pneumonia. The course of RS infection. Prognosis. Diagnostics. Treatment. Indications for hospitalization. Opportunities of a home treatment program. Pathogenetic and symptomatic therapy. Indications for antibacterial therapy. Prevention. Early isolation of the patient. Individual prophylaxis. RHINOVIRUS INFECTION Definition. Ethnology. The rhinovirus causative agent and its properties. Epidemiology. Sources of infection. Infection transmission routes. Vulnerability. Population prevalence. Pathogenesis. Predominant involvement of the lower nasal turbinate epithelium. Clinical aspect. Latent period. The initial manifestations and their further development. Diagnostics. Treatment. Arrangement of a home treatment program. Pathogenetic and symptomatic therapy. Prophylaxis.		

		Early isolation of the patient. Individual prophylaxis.		
8		L.2 HERPES VIRUS INFECTION Definition. Etiology. Herpes simplex, smallpox, chickenpox, herpes zoster, infectious mononucleosis. The pathogen and its main properties. Epidemiology. Sources of infection. Transmission mechanism. Congenital herpes infection and transplacental transmission of the virus. Pathogenesis, pathological anatomy. Clinical aspect. Clinical forms of infection. Latent period. Herpes skin lesions. Herpes lesions of the eye mucosa. The nervous system involvement. Herpes infection relapses. Complications. Outcomes. Diagnostics. Value of clinical and laboratory data. Virus isolation. Serological diagnosis (CF test, neutralization test). Differential diagnosis. Treatment. Anti-herpes medications within the treatment of various lesion types. Vaccine therapy. Indications for prescribing antibiotics. Prevention. Prevention of contact and airborne transmission. Prophylactic vaccination and immunoprophylaxis of herpes infection relapses.	-	2
9		L.3 VIRAL HEPATITIS A Definition. Etiology. Epidemiology. Sources of infection. The duration of the patients' infectivity period. Epidemiological significance of patients with anicteric and inapparent types. Mechanism and transmission factors. Vulnerability of different age groups. Immunity. Seasonality. Pathogenesis, pathological anatomy. Clinical aspect. Classification of viral hepatitis. The duration of the latent period. Duration and clinical aspect of the pre-icteric phase. Variety of the pre-icteric phase in viral hepatitis A. The icteric phase and its clinical specification. The period of recovery. Clinical diagnostic criteria of viral hepatitis A. Types of the course. Outcomes and prognosis of viral hepatitis A. Prognosis. Diagnostics. The importance of clinical and epidemiological data, the results of biochemical assay: detection of hyperfermentemia, impaired pigment and protein metabolism. Immunological diagnostics. Instrumental methods (ultrasound of the liver, liver scan, computed tomography). Differential diagnosis. Treatment. The leading importance of the regimen and diet therapy. Pathogenetic therapy. Rehabilitation of the recovered people. Pre-hospital treatment. Home treatment program. Prognosis. Prevention. The importance of early detection and hospitalization of patients. Monitoring contacts. Disinfection. Hospital discharge rules. Immunoglobulin prophylaxis. Prophylactic vaccination. Follow-up care of the recovered people. VIRAL HEPATITIS E Definition. Etiology.	-	2

		Epidemiology. Sources of infection. The main transmission route. Vulnerability of different age groups. The main risk group. Immunity. Seasonality. Endemicity. Pathogenesis. The pathogenic features of hepatitis E virus infection in pregnant women and in severe cases. Effects of severe types on the fetus. Clinical aspect. Latent period and its duration. Features of the pre-icteric phase. The icteric phase: features of the clinical course. Clinical aspect of severe course in pregnant women. Termination of pregnancy. Bleeding. Development of DIC syndrome. Diagnostics. The crucial importance of clinical and epidemiological data. Laboratory immunological diagnostics. Immune electron microscopy. Their importance for the detection of sporadic cases. Differential diagnosis. Treatment. The importance of regimen and diet therapy. Pre-hospital treatment stage. Features of therapy in pregnant women. The need for combined therapy including an obstetrician and reasonable obstetric tactics. Prevention and treatment of hemorrhagic syndrome and acute renal failure. Prognosis. Prevention. The importance of early detection and hospitalization of patients. Monitoring contacts. Disinfection. Follow-up care of the recovered people.		
10		L.4 VIRAL HEPATITIS B Etiology. The Dane particle and its antigenic structure. Epidemiology. Sources of infection. Epidemiological significance of asymptomatic carriers and chronic patients in viral hepatitis. Transmission mechanism. Artificial and natural transmission routes. The importance of percutaneous (household) and sexual transmission. Vulnerability. Risk groups. Immunity. Pathogenesis and pathological anatomy. Clinical aspect. Latent period and its duration. Duration and clinical manifestations of the pre-icteric phase. Types of the pre-icteric phase. Clinical specification of the icteric phase. The period of recovery. Clinical diagnostic criteria of viral hepatitis B. Variety of the course in hepatitis B. Severity criteria. Complications. Clinical specification of acute hepatic encephalopathy. Relapses and exacerbations. Outcomes and prognosis of acute viral hepatitis B. Chronic viral hepatitis B: clinical specification of types. Outcomes. Prognosis. Diagnostics. The importance of clinical and epidemiological data. Immunological diagnostics. Various immunological markers of viral hepatitis B and their importance for the diagnosis and prognosis. Biochemical assay: detection and clinical interpretation of hyperfermentemia and metabolic disorders of pigment and protein. Instrumental diagnostic methods (liver ultrasound, liver scan, needle biopsy, computed	-	2

		tomography, etc.). Diagnostic features of chronic viral hepatitis B. Differential diagnosis. Treatment. Rehabilitation of the recovered people. Prevention. The importance of early and active detection of infectious cases and carriers. Sanitary and hygienic services. Follow-up care of the recovered people and carriers. Prospects of active and passive immunization. Vaccines of the 1st and 2nd generations. Emergency prevention. Specific immunoglobulin B. VIRAL HEPATITIS D. Etiology. The causative agent and its obligate dependence on the hepatitis B virus. Epidemiology. Sources of infection. Transmission mechanism. Simultaneous infection with hepatitis B virus (co-infection). Infection of viral hepatitis B convalescents, HBsAg carriers and chronic hepatitis B (superinfection) patients. Risk groups. Pathogenesis. Potentiation of the hepatitis B virus pathogenesis by delta-infection (HDV). Features of the pre-icteric phase. Acyclicity of the icteric phase. Fulminant course. Other outcomes. Prognosis. Acute hepatitis D in hepatitis B convalescents, HBsAg carriers and chronic hepatitis B patients. Latent period. Features of the pre-icteric and icteric phases. Ascites. Early indications of chronic hepatitis. Prognosis. Chronic viral hepatitis D. Clinical specification. Outcomes. Prognosis. Diagnostics. Treatment. VIRAL HEPATITIS C Definition. Etiology. Modern ideas of the pathogen antigenic structure. Epidemiology. Sources of infection: symptomatic and asymptomatic virus carriers. The role of patients with anicteric types. The crucial role of hemotransfusions and blood product administration. Additional importance of sexual and percutaneous (household) transmission routes. Risk groups. Pathogenesis. Features of the virus-induced effect on hepatocytes in acute and chronic hepatitis C. The influence of immune defects on the chronic hepatitis development. Involvement of the hepatitis C virus in the development of autoimmune extrahepatic lesions and primary liver cancer. Clinical aspect. Latent period. Features of the pre-icteric phase. The icteric phase and its clinical specification. Anicteric and subclinical types. The frequency of transition to chronic hepatitis in icteric and anicteric types. The phenomenon of "imaginary well-being". Chronic hepatitis C and its features. Other outcomes. Diagnostics. The importance of clinical and epidemiological data. The crucial role of immunological diagnostics. Duration of the antibodies detection in acute hepatitis C virus. Test kits of different generations for the antibodies detection. Polymerase chain reaction for detecting virus RNA in blood. The value of biochemical		

		data. Diagnosis of chronic hepatitis C. The role of liver biopsy in the diagnosis of asymptomatic cases. Differential diagnosis. Treatment. Features of treatment for chronic hepatitis C. Prognosis. Prevention. Active detection of infectious cases and carriers. Prevention management of post-transfusion hepatitis. Follow-up care of chronic hepatitis patients and carriers		
11		L.5 HIV INFECTION (ACQUIRED IMMUNODEFICIENCY SYNDROME, AIDS) OPPORTUNISTIC DISEASES Definition. Etiology. The causative agent and its main properties. / Classification. Genetic and antigenic variability. The peculiar biological action of the pathogen. Stability in the external environment. Epidemiology. Sources of infection. Mechanism and transmission routes. Risk groups. Risk of Healthcare-Associated Infection (HAI). Transplacental transmission of infection. Immunity. Predicting the development of the epidemiological process. Pathogenesis, pathological anatomy. Virus entry. Stages of interaction with immunocytes. Development mechanism of immunological disorders. Activation of opportunistic pathogens and invasions. Development mechanism of secondary infections (protozoal infections, mycoses, viral and bacterial infections, including tuberculosis). The appearance of tumors. Pathomorphology. Clinical aspect. Stages of HIV infection. Latent period. Primary infection. Generalized lymphadenopathy. Clinical "AIDS-related complex" (minor form). The AIDS clinical aspect. WHO criteria. Stages of HIV infection according to V.I. Pokrovsky. Specification of the main opportunistic infections. Specifications of systemic lesions and course variants. Features of the HIV clinical course in children. Diagnostics. The role of integrated epidemiological, clinical and laboratory data in early HIV diagnosis. Clinical and laboratory diagnostics of the "AIDS-related complex" and AIDS. Laboratory study methods: serological (ELISA, western blotting, etc.), virological (virus isolation), study of the cell-mediated immunity. Treatment. Etiotropic therapy and antiviral medications. Immunomodulatory and immune replacement therapy. Treatment of opportunistic infections, including tuberculosis, invasions and oncopathology. Symptomatic therapy. Treatment of emergency conditions. Prevention. Personal prevention measures. Public prevention. The WHO program. The global strategy to combat HIV infection. Legal and medical-deontological issues in AIDS care.	-	2
12		L.6 SYSTEMIC TICK-BORNE BORRELIOSIS (LYME DISEASE)	-	2

		Definition. Etiology. The pathogen and its main properties. Epidemiology. Reservoirs and carriers. Infection mechanism. Natural foci (including the central regions of Russia). The potential for long-term pathogen presence in the patient's body. Pathogenesis of various stages of the disease. Pathological anatomy. Clinical aspect. Latent period. Primary lesion. Stages of the disease course. Stage I: common and uncommon symptoms. Stage II: clinical polymorphism. Lesions to the cardiovascular and nervous systems. Stage III: features of the clinical course. Variety of joint lesions. Complications. Prognosis. Diagnostics. The role of epidemiological and clinical data. Laboratory diagnostics: borrelia isolation, immunological studies (IIF, ELISA, western blotting, paired sera analysis in different stages of the disease). Differential diagnosis. Treatment. Etiotropic therapy and the need for its implementation in all stages due to the prolonged pathogen presence in the body. Pathogenetic therapy in different disease stages. Prevention and treatment of complications. Prevention. Anti-epidemic measures. Disinsection. Personal prevention.		
13	Differential diagnosis of infectious diseases	L.1 HEMORRHAGIC FEVER WITH RENAL SYNDROME (HFRS) AND OTHER (CRIMEAN-CONGO, MARBURG, EBOLA, YELLOW) FEVERS Definition. Etiology. The causative agent and its main properties. The most pathogenic serotypes for humans. Epidemiology. Natural foci (including the central re-gions of Russia). Infection sources, mechanism and transmission routes. Immunity. Prevalence. Seasonality. Pathogenesis and pathological anatomy. Virus entry, viremia and toxemia. Angiopathy. Development mechanisms of hemorrhagic syndrome, lesions of the nervous system and kidneys. The role of auto-allergy in pathogenesis. Pathological changes in internal organs. Clinical aspect. Latent period and the cyclical nature of the disease. Hemorrhagic manifestations. Renal syndrome. Types of the course. Acute renal failure. Other complications. Dynamics of the recovery period and residual effects. Prognosis. Diagnostics. The importance of epidemiological data. Clinical diagnosis. Laboratory diagnostics: complete blood count and urinalysis. Serological diagnostics (IIF) with the study of paired sera in the early stages. Differential diagnosis. Treatment. Pathogenetic and symptomatic therapy. Intensive therapy for acute renal failure. Indications for extracorporeal dialysis. Follow-up care of the recovered people. In terms of differential diagnosis with HFRS: CRIMEAN-CONGO (SOUTHERN) HEMORRHAGIC	-	2

		FEVER Definition. Etiology. Epidemiology. Natural foci. Sources of infection. Carriers. Infection mechanism. Potential of intrauterine infection. Seasonality. Pathogenesis, pathological anatomy. Clinical aspect. Latent period. The main manifestations of the disease. Hemorrhagic syndrome. Bleeding. Other complications. Prognosis. Diagnostics. The role of epidemiological and clinical data. Virological and serological studies. Differential diagnosis. Treatment. Pathogenetic and symptomatic therapy. Prevention. OMSK HEMORRHAGIC FEVER Definition. Etiology. Epidemiology. Infection reservoirs in nature. Carriers of the virus. Infection mechanism. Seasonality. Pathogenesis, pathological anatomy. Clinical aspect. Latent period. The main clinical manifestations of the disease. Complications. Prognosis. Diagnostics. Laboratory diagnostics (CF test, neutralization test). Treatment. Prevention. CONGO, LASSA, EBOLA, YELLOW FEVER Etiology. Epidemiology. Reservoir in nature. Carriers. Infection mechanism. Latency. The main clinical manifestations. Prevention. Q FEVER Epidemiology. Infection reservoirs in nature. Primary natural and secondary anthropurgic foci of infection. Infection mechanism and transmission routes. Vulnerability. Immunity. Prevalence. Pathogenesis and pathological anatomy. Entry and reproduction of Rickettsiae. Hematogenous pathogenic dissemination. Intoxication. Involvementof various systems and organs. Clinical aspect. Clinical classification. Latent period. The main manifestations of the disease. Frequency and severity of respiratory involvement. Types of the course. Complications. Prognosis. Diagnostics. The crucial importance of laboratory tests (CF and agglutination tests). The importance of clinical and epidemiological data. Immunofluorescence assay. Differential diagnosis. Treatment. Antibiotic therapy. Pathogenic and - symptomatic therapy. Prevention. Early detection and isolation of infection sources. Sanitary and hygienic services. Disinfection and disinfection. Specifics.		
14		L2 DIFFERENTIAL DIAGNOSIS OF JAUNDICE-ASSOCIATED DISEASES Infectious diseases associated with jaundice: viral hepatitis, leptospirosis, infectious mononucleosis, yersiniosis, parasitic liver lesions, and malaria. Clinical and pathophysiological specification of jaundice: adrenal, hepatic, subhepatic. Clinical and laboratory syndromes: cytolysis, cholestasis, mesenchymal-inflammatory. Early diagnosis of viral	-	2

		hepatitis. Differential diagnosis of icteric viral hepatitis: distinguishing from other infectious diseases. Pre-hospital examination of jaundice patients in suspected infection. Indications for hospitalization. Primary antiepidemic measures in the focus of infection.		
15		L.3 DIFFERENTIAL DIAGNOSIS OF LYMPHADENOPATHY-ASSOCIATED DISEASES Classification of lymphadenopathies by size and localization. Generalized lymphadenopathies: HIV, EBV, adenovirus infection, CMV, lymph node tuberculosis, sarcoidosis, toxoplasmosis, etc. Localized lymphadenopathies: cat-scratch disease, spirillary rat-bite fever, etc.; Mesenteric adenitis: yersiniosis, pseudotuberculosis, etc. Differential diagnosis: distinguishing from lymphomas, metastatic cancer, granulomatous lymphadenitis, acute suppurative lymphadenitis. Pre-hospital examination of patients with lymphadenopathy. Indications for hospitalization.	-	2
16		L.4 DIFFERENTIAL DIAGNOSIS OF FEVER-ASSOCIATED DISEASES Classification of lymphadenopathies by size and localization. Generalized lymphadenopathies: HIV, EBV, adenovirus infection, CMV, lymph node tuberculosis, sarcoidosis, toxoplasmosis, etc. Localized lymphadenopathies: cat-scratch disease, spirillary rat-bite fever, etc.; Mesenteric adenitis: yersiniosis, pseudotuberculosis, etc. Differential diagnosis: distinguishing from lymphomas, metastatic cancer, granulomatous lymphadenitis, acute suppurative lymphadenitis. Pre-hospital examination of patients with lymphadenopathy. Indications for hospitalization.	=	2
17		L.5 DIFFERENTIAL DIAGNOSIS OF DISEASES PRESENTING WITH OROPHARYNGEAL INVOLVEMENT Infectious diseases presenting with pharyngeal lesions: acute tonsillitis, diphtheria, mononucleosis, scarlet fever, herpangina, tularemia. Clinical semiotics of pharyngeal lesions (hyperemia, edema, plaque, localization. Prevalence, color, plaque removal, pain on swallowing, regional lymphadenopathy). Intensity of intoxication syndrome. Clinical, epidemiological and bacteriological diagnostics. Differential diagnosis.	-	2
18		L6 DIFFERENTIAL DIAGNOSIS OF DISEASES PRESENTING WITH EXANTHEM AND ENANTHEM Early and differential diagnosis of diseases presenting with exanthemae: measles, scarlet fever, rubella, epidemic typhus, Brill-Zinsser disease, yersiniosis, meningococcemia, hemorrhagic fevers, erysipelas, typhoid fever, paratyphoids. Their early diagnosis. Specification of exanthemae (spot, roseola, erythema,	-	2

		hemorrhages, papule, tubercule, node, blister, vesicle, bulla, pustule, herpes and their residual effects). Clinical and epidemiological laboratory diagnostics. Differential diagnosis of infectious diseases associated with exanthema. Pre-hospital examination of patients with exanthem. Indications for hospitalization. Primary prevention and anti-epidemic measures in the focus of infection.		
19		L.7 DIFFERENTIAL DIAGNOSIS OF FEVER-ASSOCIATED DISEASES Acute infectious diseases with high and prolonged fever: typhoid fever and paratyphoids, acute brucellosis, Brill-Zinsser disease, malaria, meningococcal infection, - mononucleosis, yersiniosis, Q fever, HIV infection. Their early clinical manifestations. Clinical, epidemiological and laboratory diagnostics. Differential diagnosis of infectious diseases presenting with high, prolonged fever.	-	2
20		L.8 DIAGNOSTIC CRITERIA, DIAGNOSTIC PATTERNS AND MANAGEMENT TACTICS IN URGENT CASES OF INFECTIOUS DISEASES Diagnosis and therapy of toxic shock syndrome, hypovolemic shock and anaphylaxis in the clinical aspect of infectious diseases. Diagnosis and treatment of cerebral and pulmonary edema, acute renal and liver failure. Infectious diseases complicated by the development of toxic shock syndrome. Pathophysiological mechanisms of toxic shock syndrome. Clinical classification. Clinical and pathogenetic specification of toxic shock syndrome stages. Clinical criteria of diagnosis. Urgent therapeutic measures. Hypovolemic shock in acute intestinal infections. Pathophysiological mechanisms of hypovolemic shock. Dehydration degrees and their clinical diagnostic criteria. Intravenous rehydration therapy. Anaphylaxis during etiotropic and pathogenetic therapy. Clinical diagnostic criteria. Urgent therapeutic services. The brain swelling and cerebal edema. Pathophysiological mechanisms of development. The brain swelling and cerebral edema as the manifestations of severe influenza, intestinal infections, and as meningococcal disease complication. Clinical diagnostic criteria. Urgent therapeutic measures.	-	2
21		L.9 URGENT CONDITIONS. PULMONARY EDEMA Pulmonary edema in infectious respiratory tract diseases and their complications. Pathophysiological mechanisms of development. Stages of pulmonary edema. Clinical diagnostic criteria. Urgent therapeutic measures. Acute renal failure of mainly prerenal (meningococcal, acute intestinal infections) and renal (HFRS, leptospirosis, malaria) origin. Pathophysiological mechanisms of development. Clinical and laboratory diagnostic criteria. Urgent therapeutic measures	-	2
22		L.10 URGENT CONDITIONS. ACUTE RENAL FAILURE Pulmonary edema in infectious respiratory tract diseases	-	2

		and their complications. Pathophysiological mechanisms of development. Stages of pulmonary edema. Clinical diagnostic criteria. Urgent therapeutic measures. Acute renal failure of mainly prerenal (meningococcal, acute intestinal infections) and renal (HFRS, leptospirosis, malaria) origin. Pathophysiological mechanisms of development. Clinical and laboratory diagnostic criteria. Urgent therapeutic measures		
23		L.11 DIFFERENTIAL DIAGNOSIS OF DISEASES PRESENTING WITH LUNG INVOLVEMENT Infectious diseases presenting with pharyngeal lesions: acute tonsilitis, diphtheria, mononucleosis, scarlet fever, herpangina, tularemia. Clinical semiotics of pharyngeal lesions (hyperemia, edema, plaque, localization. Prevalence, color, plaque removal, pain on swallowing, regional lymphadenopathy). Intensity of intoxication syndrome. Clinical, epidemiological and bacteriological diagnostics. Differential diagnosis.	-	2
24		L.12 DIFFERENTIAL DIAGNOSIS OF DISEASES PRESENTING WITH INTESTINAL INVOLVEMENT Jaundice-associated infections: viral hepatitis, leptospirosis, mononucleosis, yersiniosis, parasitic liver lesions, malaria. Clinical and pathophysiological specification of jaundice: adrenal, hepatic, subhepatic. Clinical and laboratory syndromes: cytolysis, cholestasis, mesenchymal-inflammatory. Early diagnosis of viral hepatitis. Differential diagnosis of icteric viral hepatitis: distinguishing from other infectious diseases. Pre-hospital assessment of jaundice in suspected infection. Indications for hospitalization. Primary anti-epidemic measures in the focus of infection.	-	2
		TOTAL		48

5.3. Topical plan of practical sessions

Sl. No.	Name of the academic course unit	Topics of practical sessions	Active forms of study	Means of actual monitoring	Labor intensity
1	General issues of infectious pathology	PS.1 DIAGNOSTIC PATTERNS IN INFECTIOUS DISEASES. Study of criteria leading to suspected infection; the main laboratory methods in infectious diseases: virological, microbiological, immunological, parasitological, PCR, genotyping; Instrumental methods: rectoromanoscopy, imaging etc. Severity assessment in infectious process: clinical, laboratory and instrumental	GD, CS	Control questions, tests, case tasks	4

		criteria. Outcomes of infections. Treatment patterns in infectious cases.			
2		PS.2 FUNDAMENTALS OF RATIONAL APPROACH IN THERAPY FOR INFECTIONS Patterns of etiotropic therapy: a/b medications, classification, spectrum of action, side effects; antiviral, immunomodulatory, antifungal and antiparasitic medications. Specific immunotherapy. Serum therapy. Antitoxic and antimicrobial sera and modes of their administration. Complications of serum therapy; the use of immunoglobulins. Immunomodulatory therapy. Mechanisms of action, indications and contraindications.	GD, CS	Control questions, tests, case tasks	4
3	Specific issues of infectious pathology	PS.3 SALMONELLA: SALMONELLOSIS (GASTROINTESTINAL AND GENERALIZED TYPES) Review of theoretical material on the lecture topic. Study of clinical aspect, indications for hospitalization, treatment, and prevention of salmonellosis, using several cases.	GD, CS	Control questions, tests, case tasks	4
4		PS.4 CHOLERA Review of theoretical material on the lecture topic. Study of clinical aspect, indications for hospitalization, treatment, and prevention of cholera, using several cases.	GD, CS	Control questions, tests, case tasks	4
5		PS.5 INVASIVE INTESTINAL INFECTIONS: SHIGELLOSIS, YERSINIOSIS, PSEUDOTUBERCULOSIS Review of theoretical material on the lecture topic. Study of clinical aspect, treatment, and prevention of invasive intestinal infections, using several cases. Differential diagnosis: distinguishing from other intestinal diseases.	GD, CS	Control questions, tests, case tasks	4

6		PS.6 FOOD-BORNE TOXICOINFECTIONS, BOTULISM Review of theoretical material on the lecture topic. Study of clinical aspect, treatment, and prevention of food-borne toxicoinfections, using several cases. A special role is assigned to sanitary surveillance and health education. Investigation of seroprophylaxis.	GD, CS	Control questions, tests, case tasks	4
7		PS.7 AMOEBIASIS. BALANTIDIASIS Review of theoretical material on the lecture topic. Study of clinical aspect, treatment, and prevention of protozoal infections, using several cases.	GD, CS	Control questions, tests, case tasks	4
8		PS.8 TYPHOID FEVER Review of theoretical material on the lecture topic. Study of clinical aspect, treatment, and prevention of epedemic typhus, using several cases. Typhus focus: disinfection, disinsection, medical surveillance protocols.	GD, CS	Control questions, tests, case tasks	4
9		PS.9 TASKS SOLVING Solving of tasks on the covered topics (with detailed consideration).	GD, CS	case tasks	4
10	Specific issues of infectious pathology	PS.1 VIRAL HEPATITIS AE Mechanism and transmission factors. Vulnerability of different age groups. Immunity. Seasonality. Clinical aspect. Classification of viral hepatitis. Diagnostics. The role of clinical and epidemiological data. The results of biochemical assay: Differential diagnosis. Treatment. The leading importance of the regimen and diet therapy. Pathogenetic therapy. Rehabilitation of the recovered people.	GD, CS	Control questions, tests, case tasks	4

		Prophylactic vaccination. Follow-up care for the recovered people.			
11		PS.2 VIRAL HEPATITIS VCD Mechanism and transmission factors. Vulnerability of different age groups. Immunity. Seasonality. Clinical aspect. Classification of viral hepatitis. Diagnostics. The role of clinical and epidemiological data. The results of biochemical assay: Differential diagnosis. Treatment. The leading importance of the regimen and diet therapy. Pathogenetic therapy. Rehabilitation of the recovered people. Prophylactic vaccination. Follow-up care for the recovered people.	GD, CS	Control questions, tests, case tasks	4
12	Specific issues of infectious pathology	PS.3 DIFFERENTIAL DIAGNOSIS OF JAUNDICE Jaundice-associated infections: viral hepatitis, leptospirosis, mononucleosis, yersiniosis, parasitic liver lesions, malaria. Clinical and pathophysiological specification of jaundice: adrenal, hepatic, subhepatic. Clinical and laboratory syndromes: cytolysis, cholestasis, mesenchymal-inflammatory. Early diagnosis of viral hepatitis. Differential diagnosis of viral hepatitis: distinguishing from other jaundice-associated infectious diseases. Pre-hospital assessment of jaundice in suspected infection.	GD, CS	Control questions, tests, case tasks	4
13		PS.4 MENINGOCOCCAL DISEASE Review of theoretical material on the lecture topic. Study of clinical aspect, treatment, and prevention of meningococcal disease, using several cases. Study of differential diagnosis strategy: distinguishing from other neurological diseases.	GD, CS	Control questions, tests, case tasks	4

14		PS.5 DIPHTHERIA Review of theoretical material on the lecture topic. Study of clinical aspect, treatment, and prevention of diphtheria, using several cases. Active immunization. Services in the infectious focus. Vaccination of convalescents. Detection and sanitation of bacterial carriers.	GD, CS	Control questions, tests, case tasks	4
15		PS.6 SEPSIS Review of theoretical material on the lecture topic. Study of clinical aspect and treatment for sepsis, using several cases.	GD, CS	Control questions, tests, case tasks	4
16		PS.7 SYSTEMIC TICK-BORNE BORRELIOSIS (LYME DISEASE), TICK-BORNE ENCEPHALITIS Review of theoretical material on the lecture topic. Study of clinical aspect, treatment, anti-epidemic measures, disinsection, and personal prevention, using several cases.	GD, CS	Control questions, tests, case tasks	4
17		PS.8 MALARIA Review of theoretical material on the lecture topic. Study of clinical aspect and treatment for malaria, using several cases. The importance of early detection and treatment of infected patients and parasite carriers. Vector control. Chemoprophylaxis. Prevention of malaria importation. The WHO Global Malaria Program and its outcomes.	GD, CS	Control questions, tests, case tasks	4
18		PS.9 INFLUENZA AND OTHER ACUTE RESPIRATORY DISEASES Review of theoretical material on the lecture topic. Study of clinical aspect, treatment, and prevention of respiratory diseases, using several cases. Study of	GD, CS	Control questions, tests, case tasks	4

		differential diagnosis issues.			
19		PS.10 HERPES INFECTION Review of theoretical material on the lecture topic. Study of clinical aspect, treatment, and prevention of herpes infections, using several cases.	GD, CS	Control questions, tests, case tasks	4
20		PS.11 HIV INFECTION (ACQUIRED IMMUNODEFICIENCY SYNDROME, AIDS) OPPORTUNISTIC DISEASES Review of theoretical material on the lecture topic. Study of clinical aspect, treatment, and prevention of HIV infection, using several cases. Study of opportunistic diseases, their clinical manifestation and treatment regimens.	GD, CS	Control questions, tests, case tasks	4
21		PS.12 TASKS SOLVING Solving of tasks on the covered topics (with detailed consideration).	GD, CS	case tasks	4
22	Specific issues of infectious pathology	PS.1 HEMORRHAGIC FEVER WITH RENAL SYNDROME (HFRS) AND OTHER (CRIMEAN-CONGO, MARBURG, EBOLA, YELLOW) FEVERS Review of theoretical material on the lecture topic. Study of clinical aspect, treatment, and specific prevention, using several cases. Disinfection and disinsection.	GD, CS	Control questions, tests, case tasks	4
23	Specific issues of infectious pathology	PS.2 FEATURES OF CHILDHOOD INFECTIOUS IN ADULTS (MEASLES, MUMPS INFECTION, RUBELLA) Infection etiology, pathogenesis, sources, transmission routes, contagiousness, latency, seasonality. Clinical features of measles, rubella, and mumps. Differentiating the measles and rubella exanthemae. Complications. Features of the course in men and women. Fetal	GD, CS	Control questions, tests, case tasks	4

		pathology in rubella. Diagnostics. Differential diagnosis. Treatment. Prevention.			
24	Specific issues of infectious pathology	PS.3 HELMINTHIC INFECTIONS CAUSED BY NEMATODES (ROUNDWORMS) AND CESTODES (TAPEWORMS) Review of theoretical material on the lecture topic. Study of clinical aspect, treatment, prevention of toxic and allergic reactions in helminthiasis. Treatment features of chronic helminthiasis and its complication by bacterial infection, dysbiosis. Slides presentation.	GD, CS	Control questions, tests, case tasks	4
25	Differential diagnosis of infectious diseases	PS.4 DIAGNOSTIC CRITERIA, SEARCH PATTERNS, MEDICAL TACTICS IN JAUNDICE Jaundice-associated infections: viral hepatitis, leptospirosis, mononucleosis, yersiniosis, parasitic liver lesions, malaria. Clinical and pathophysiological specification of jaundice: adrenal, hepatic, subhepatic. Clinical and laboratory syndromes: cytolysis, cholestasis, mesenchymal-inflammatory. Early diagnosis of viral hepatitis. Differential diagnosis of viral hepatitis: distinguishing from other jaundice-associated infectious diseases. Pre-hospital assessment of jaundice in suspected infection.	GD, CS	Control questions, tests, case tasks	4
26	Differential diagnosis of infectious diseases	PS.5 DIAGNOSTIC CRITERIA, SEARCH PATTERNS, MEDICAL TACTICS IN DIARRHEA. Acute infectious diseases associated with diarrhea: dysentery, food-borne toxicoinfections, salmonellosis, cholera, yersiniosis, botulism, viral diarrhea, parasitic intestinal lesions. Early clinical diagnosis. Gastroenteritis, gastroenterocolitis, colitis, toxidrome. Degrees of	GD, CS	Control questions, tests, case tasks	4

		dehydration. Severity criteria. Differential diagnosis of infectious diseases presenting with diarrhea. Pre-hospital assessment of diarrhea in suspected infection. Indications for hospitalization. Primary anti-epidemic measures in the focus of infection.			
27	Differential diagnosis of infectious diseases	PS.6 DIAGNOSTIC CRITERIA, SEARCH PATTERNS, MEDICAL TACTICS IN MENINGEAL SYNDROME Early and differential diagnosis of neuroinfections. Infectious diseases associated with meningeal syndrome: meningococcal meningitis, viral serous meningitis, secondary serous meningitis in leptospirosis, yersiniosis, typhoid fever, and secondary purulent meningitis, tuberculous meningitis. Their early diagnosis. Clinical-epidemiological, clinical-liquor and differential diagnosis. Encephalitic syndrome. Clinical criteria of meningoencephalitis. Medical care (including emergency) at the pre-hospital stage. Primary anti-epidemic measures in the focus of infection.	GD, CS	Control questions, tests, case tasks	4
28	Differential diagnosis of infectious diseases	PS.7 DIAGNOSTIC CRITERIA, SEARCH PATTERNS, MEDICAL TACTICS IN LYMPHADENOPATHY Classification of lymphadenopathies by size and localization. Generalized lymphadenopathies: HIV, EBV, adenovirus infection, CMV, lymph node tuberculosis, sarcoidosis, toxoplasmosis, etc. Localized lymphadenopathies: cat-scratch disease, spirillary rat-bite fever, etc.; Mesenteric adenitis: yersiniosis, pseudotuberculosis, etc. Differential diagnosis: distinguishing from lymphomas, metastatic cancer, granulomatous lymphadenitis, acute suppurative lymphadenitis.	GD, CS	Control questions, tests, case tasks	4

		Pre-hospital examination of patients with lymphadenopathy. Indications for hospitalization.			
29	Differential diagnosis of infectious diseases	PS.7 DIAGNOSTIC CRITERIA, SEARCH PATTERNS, MEDICAL TACTICS IN OROPHARYNGEAL LESION Infectious diseases presenting with pharyngeal lesions: acute tonsilitis, diphtheria, mononucleosis, scarlet fever, herpangina, tularemia. Clinical semiotics of pharyngeal lesions (hyperemia, edema, plaque, localization. Prevalence, color, plaque removal, pain on swallowing, regional lymphadenopathy). Intensity of intoxication syndrome. Clinical, epidemiological and - bacteriological diagnostics. Differential diagnosis.	GD, CS	Control questions, tests, case tasks	4
30	Differential diagnosis of infectious diseases	PS.9 DIAGNOSTIC CRITERIA, SEARCH PATTERNS, MEDICAL TACTICS IN PNEUMONIA Differential diagnosis of diseases presenting with pneumonia: ornithosis, coxellosis, legionellosis, mycoplasma infection, plague, pneumocystis pneumonia, tuberculosis. Examination methods of patients with pneumonia. Indications for hospitalization. Primary anti-epidemic measures in the focus of infection.	GD, CS	Control questions, tests, case tasks	4
31	Differential diagnosis of infectious diseases	PS.10 DIAGNOSTIC CRITERIA, SEARCH PATTERNS, MEDICAL TACTICS IN EXANTHEMA AND ENANTHEMA Early and differential diagnosis of diseases presenting with exanthemae: measles, scarlet fever, rubella, epidemic typhus, Brill-Zinsser disease, yersiniosis, meningococcemia, hemorrhagic fevers, erysipelas, typhoid fever, paratyphoids. Their early diagnosis. Specification of exanthemae (spot, roseola, erythema, hemorrhages, papule, tu bercule, node, blister, vesicle, bulla,	GD, CS	Control questions, tests, case tasks	4

		pustule, herpes and their residual effects). Clinical and epidemiological laboratory diagnostics. Differential diagnosis of infectious diseases associated with exanthema. Pre-hospital examination of patients with exanthemea. Indications for hospitalization. Primary anti-epidemic measures in the focus of infection.			
32	Differential diagnosis of infectious diseases	PS.11 DIAGNOSTIC CRITERIA, SEARCH PATTERNS, MEDICAL TACTICS IN FEVER OF UNKNOWN ORIGIN Early and differential diagnosis of diseases associated with high fever. Acute infectious diseases associated with high and prolonged fever: typhoid fever and paratyphoids, acute brucellosis, Brill-Zinsser disease, malaria, meningococcal infection, mononucleosis, yersiniosis, Q fever, HIV infection. Their early clinical manifestations. Clinical, epidemiological and laboratory diagnostics. Differential diagnosis of infectious diseases presenting with high, prolonged fever.	GD, CS	Control questions, tests, case tasks	4
33	Differential diagnosis of infectious diseases	PS.12 DIAGNOSTIC CRITERIA, SEARCH PATTERNS, MEDICAL TACTICS IN FEVER OF UNKNOWN ORIGIN Early and differential diagnosis of diseases associated with high fever. Acute infectious diseases associated with high and prolonged fever: typhoid fever and paratyphoids, acute brucellosis, Brill-Zinsser disease, malaria, meningococcal infection, mononucleosis, yersiniosis, Q fever, HIV infection. Their early clinical manifestations. Clinical, epidemiological and laboratory diagnostics. Differential diagnosis of infectious diseases presenting with high, prolonged fever.	GD, CS	Control questions, tests, case tasks	4

34	Differential diagnosis of infectious diseases	PS.13 DIAGNOSTIC CRITERIA AND APPROACH, EMERGENCY MANAGEMENT TACTICS IN INFECTIONS Review of theoretical material on the lecture topic. Pathophysiological mechanisms of development in urgent and life-threatening conditions appearing in infectious practice. Clinical and laboratory diagnostic criteria. Urgent therapeutic measures.	GD, CS	Control questions, tests, case tasks	4
35	Differential diagnosis of infectious diseases; Specific issues of infectious diseases	PS.14 TASKS SOLVING Solving of tasks on the covered topics (with detailed consideration).	GD, CS	case tasks	4
36	Differential diagnosis of infectious diseases; Specific issues of infectious diseases	PS.15 TASKS SOLVING Solving of tasks on the covered topics (with detailed consideration).	GD, CS	case tasks	4
				TOTAL:	144

GD - group discussion
CS - case study

5.4. Topical plan of seminars is not provided

5.5. Topical plan of laboratory classes is not provided

5.6. Independent work:

Sl.No.	Name of the academic course unit	Types of individual study	Means of actual monitoring	Labor intensity (academic hours)
1	General issues of infectious diseases	Working with lecture materials, educational literature, bedside manner	control questions; case tasks; tests	4
2	Specific issues of infectious diseases	Working with lecture materials, educational literature, bedside manner	control questions; case tasks; tests	62
3	Differential diagnosis of infectious diseases	Working with lecture materials,	control questions; case tasks;	30

		educational literature, bedside manner	tests	
			TOTAL:	96
			Preparation for exam:	32

6. Guidelines for students on mastering the academic course

Time-management within the academic course study

A key factor for successful mastery of the course is proper study management, which ensures an even academic load distributed in accordance with the educational schedule. Effective study management can be facilitated by developing a work plan for the whole semester, month, week or for a single day. Adhering such a plan, student will be able to dedicate vacant hours to academic purposes and perform more sufficient and effective studying. Tasks for a following day should always be planned in advance.

At the end of each day, it is advisable to review the work results: student should carefully check whether everything has been completed. In case of any divergences from the plan, student should find out for what reason they occurred. Self-control is prerequisite for successful study. If something remains unfulfilled, it is necessary to find time to complete this part of the work without reducing the volume of the week plan. All practical tasks, as well as unsupervised work, are recommended to be completed immediately after mastering the relevant lecture topic. It promotes deeper acquisition of the material, enables timely identification and elimination of "gaps" in knowledge, aids in structuring of previously covered material to master new knowledge and skills.

The university's education system is based on a rational combination of several types of educational activities (primarily lectures and practical sessions); each of them requires its specific approach.

Preparation for lectures

The introduction to the academic course begins with the very first lecture, and you are required not only to pay attention, but also to take notes on your own. Working with lecture notes, it is necessary to take into account that some lectures provide direct answers to specific questions on a topic, while others reveal the correlation between phenomena, aiding the student in comprehending the fundamental developmental processes of the subject, both historical and contemporary.

Taking lecture notes is a complex classroom work that involves intensive mental engagement. Advantageous lecture notes should be taken individually by a resident doctor and include the most crucial information. It is not supposed to write down the entire lecture word-for-word, as such "abstracting" does more harm than good. A more appropriate approach is to first comprehend the lecturer's main idea, and then write it down. It is advisable to write on one side of the page or leave unfilled spaces, where later you can make additional notes and mark unclear points during independent work.

Taking notes, it is better to divide them into paragraphs with indents. Notes divisions can be correlated with questions of the lecture plan provided by lecturers. You should pay attention to the accents and conclusions that the lecturer draws, noting the most important points in the lecture material with comments such as "important", "remember well", etc. You can also do this with colored markers or pens, emphasizing terms and definitions.

It is recommended to develop a personal system of concisions, abbreviations and symbols that can be further replaced with ordinary words to reach an advanced visual perception of a text.

When working on lecture notes, it is always necessary to use not only the student's book, but also the additional literature recommended by the lecturer. It is such thorough work with the lecture material, that enables comprehensive mastery of the theoretical foundations.

Preparation for practical sessions

Careful and considerable study of the plan questions is based on mastery of the relevant lecture material, with subsequent study of compulsory and additional literature recommended for the topic. From the beginning of the course, all new concepts should be learned and recorded in the glossary (prepared in advance).

The outcomes of this work should appear as the abillity to smoothly answer the theoretical questions of the practical session, take the floor and participate in a collective discussion, and correctly perform practical tasks and control works.

Preparing for practical sessions, recommended literature should be studied with particular emphasis. Despite the completeness of the lecture notes, it is impossible to throughout enounce the material due to the limited classroom academic hours. Therefore, independent work with student's books, manuals, periodicals, the Internet, scientific and reference literature is the most effective method of obtaining additional knowledge. It allows you to significantly facilitate mastering of information, promotes deeper acquirement of the material, and develops the right attitude to a particular issue.

Recommendations for working with literature

It is advisable to start working with literature by studying general works on the topic, as well as student's books and manuals. The next step is analysing of monographs and articles dealing with certain aspects, as well as official materials and unpublished documents (research papers, dissertations), which may contain the main issues of the problem under study.

Working with sources should begin with introductory reading. That means, that student should review the text, giving accent to its structural units. During introductory reading, pages requiring more careful study are indicated with bookmarks.

Further approach to the study of sources is based on the results of introductory reading. If the task requires the study of certain text fragments, then the selective reading method is used. If the book does not have a detailed table of contents, the student's attention should be drawn to the subject and name indexes.

Selected fragments or the entire text (if it is entirely relevant to the topic) require thoughtful, unhurried reading with comprehension of the material. This reading involves highlighting of: 1) the main parts of the text; 2) the main arguments; 3) conclusions. Special attention should be paid to whether the thesis follows from the arguments or not.

It is also necessary to analyze which of the author's statements are problematic, hypothetical, and to identify hidden issues.

Obviously, such reading skill cannot be obtained at once. The best way to learn how to identify the main parts in a text, to grasp the problematic nature of statements, and to evaluate the author's position is comparative reading. It can help you to recognize different opinions on the same issue, compare the value and substantiation of the arguments and conclude that a particular position is the most convincing.

If there are different points of view on a particular issue due to the complexity of past events and legal phenomena, they should not be rejected without understanding. If there are discrepancies between the authors, it is necessary to find a rational kernel for each of them for deeper understanding of the subject matter and a more critical evaluation of the issues. Introducing with the special positions of the authors, it is necessary to identify their similar judgments, arguments, conclusions, and then compare them with each other and apply the one that is more convincing.

The next stage of working with literary sources is the creation of summaries documenting the main theses and arguments. You can take notes on separate pages, which can be easily arranged further, according to the individual topics of the course being studied. Another way is to keep thematic notebooks on each topic. It is recommended to take notes on large special monographic works in separate notebooks. Remember that notes are written on one side of the page, with margins and sufficient line spacing for corrections and comments

(these rules are followed for ease of editing). If there are citations in the notes, then an indication of the source (author, title, output data, page number) must be provided. Subsequently, this information can be used in the preparation of another task.

7. Assessment materials

Assessment materials on the academic course for conducting actual academic performance monitoring and interim assessment include examples of assessment means (Appendix A to the academic course's work program), procedure and criteria.

8. List of necessary educational literature and Internet resources to master the academic course

8.1. Educational literature:

1. Infekcionnye bolezni: uchebnoe posobie dlya studentov, obuchayushchihsya po napravleniyu podgotovki (special'nosti) «Mediko-profilakticheskoe delo» [Infectious Diseases: manual for students studying in the field of study (major) "Preventive Medicine"] / ed. by Yu.V. Lobzin. – St. Petersburg: Publishing house of SBEI HPE NWSMU named after I.I.Mechnikov, 2015. - 300 p.
https://moodle.szgmu.ru/pluginfile.php/398644/mod_resource/content/2

2. Infekcionnye bolezni: uchebnoe posobie dlya studentov V kursa lechebnogo i mediko-profilakticheskogo fakul'tetov [Infectious diseases: manual for fifth-year students of the medical and preventive faculties] / ed. by Yu. V. Lobzin.— St. Petersburg: Publishing House of SBEI HPE NWSMU named after I. I. Mechnikov, 2013. 360 p.
https://moodle.szgmu.ru/pluginfile.php/37430/mod_resource/content/1

3. Osnovnye sindromy infekcionnyh zabolevanij: uchebno-metodicheskoe posobie [The main syndromes of infectious diseases: training manual] / ed. by Yu.V.Lobzin. – St. Petersburg: Publishing house of SBEI HPE NWSMU named after I.I.Mechnikov, 2015. – 59 p.-
https://moodle.szgmu.ru/pluginfile.php/25030/mod_resource/content/2

4. Differencial'naya diagnostika osnovnyh sindromov infekcionnyh zabolevanij: uchebnoe posobie dlya studentov 6 kursa lechebnogo fakul'teta [Differential diagnosis of the main syndromes of infectious diseases: manual for students of the 6th year of General Medicine] / O.V.Anikina, V.M.Antonov, I.V.Babachenko, T.N.Bleskina, N.I.Kuznetsov, V.A.Neverov, Pilipenko V.V., A.P.Remezov; ed. by Yu.V.Lobzin. St. Petersburg: Publishing House of SBEI HPE NWSMU named after I.I.Mechnikov, 2013. 172 p. -
ttps://moodle.szgmu.ru/pluginfile.php/25030/mod_resource/content/2

5. Yushchuk, N. D. Infectious diseases: textbook / Yushchuk N. D. , Vengerov Yu. Ya. - Moscow : GEOTAR-Media, 2020. - 464 p. - ISBN 978-5-9704-5504-3. - Text : electronic // ELS "Student's Consultant" : [website]. - URL : https://www.studentlibrary.ru/book/ISBN9785970455043.html

8.2. Resources of the information and telecommunications network "Internet":

Names of the Internet resource	Web address
WHO website	www.who.int.ru
Scientific electronic library eLIBRARY.RU -	https://elibrary.ru/project_orgs.asp

FEDERAL ELECTRONIC MEDICAL LIBRARY	http://feml.scsml.rssi.ru/feml
ELS Bibliocomplectator "IPRbooks"	http://www.bibliocomplectator.ru
ELS "Bukap"	https://www.books-up.ru/
EastView Medicine and Public Health in Russia	https://dlib.eastview.com/
Electronic Medical Library "Konsul'tant vracha" [Doctor's Consultant]	http://www.rosmedlib.ru/

9. List of information technologies used to master the academic course, including a list of software, professional databases and information reference systems

9.1. List of information technologies used in the implementation of the educational process:

Sl.No.	Name of the academic course unit	Information technology
	General issues of infectious pathology	Placement of educational materials in the EIE of the FSBEI HE NWSMU named after I.I. Mechnikov under the Ministry of Health of the Russian Federation knowledge control - https://moodle.szgmu.ru/course/view.php?id=90
	Specific issues of infectious pathology	Placement of educational materials in the EIE of the FSBEI HE NWSMU named after I.I. Mechnikov under the Ministry of Health of the Russian Federation knowledge control - https://moodle.szgmu.ru/course/view.php?id=90
	Differential diagnosis of infectious diseases	Placement of educational materials in the EIE of the FSBEI HE NWSMU named after I.I. Mechnikov under the Ministry of Health of the Russian Federation knowledge control - https://moodle.szgmu.ru/course/view.php?id=90

9.2. List of software used in the educational process *(licensed and freely distributed software, including domestically produced):*

Sl.No.	Name of the software product	License validity period	Documents supporting the right to use software products
licensed software			
1.	ESET NOD 32	1 year	Public contract № 07/2020
2.	MS Windows 8 MS Windows 8.1 MS Windows 10 MS Windows Server 2012 Datacenter - 2 Proc MS Windows Server 2012 R2 Datacenter - 2 Proc	Unlimited	Public contract № 30/2013-O; Public contract № 399/2013-OA; Public contract № 07/2017-ЭА.

	MS Windows Server 2016 Datacenter Core		
3.	MS Office 2010 MS Office 2013	Unlimited	Public contract № 30/2013-OA; Public contract № 399/2013-OA.
4.	Academic LabVIEW Premium Suite (1 User)	Unlimited	Public contract № 02/2015
licensed software of domestic production			
1.	Antiplagiat	1 year	Public contract № 2409
2.	"WEBINAR (VEBINAR)" VERSION 3.0	1 year	Contract № 347/2020-М
3.	"3KL Learning management system"	1 year	Contract № 348/2020-М
4.	TrueConf Enterprise	1 year	Contract № 396/2020-ЭА
freely distributed software			
1.	Google Chrome	Unlimited	Open License Agreement GNU GeneralPublicLicense
2.	NVDA	Unlimited	Open License Agreement GNU GeneralPublicLicense
freely distributed software of domestic production			
1.	Moodle	Unlimited	Open License Agreement GNU GeneralPublicLicense

9.3. List of professional databases and information reference systems:

№ Sl.No.	Name of the software product	License validity period	Documents supporting the right to use software products	Access mode for students with disabilities
1.	Konsul'tant Plyus [Consultant Plus]	1 year	Contract № 655/2020-ЭА	-
2.	ELS "Student's Consultant"	1 year	Contract № 307/2020-ЭА	http://www.studmedlib.ru/
3.	EML "Konsul'tant vracha" [Doctor's Consultant]	1 year	Contract № 281/2020-ЭА	http://www.rosmedlib.ru/
4.	ELS "ibooks.ru"	1 year	Contract № 06/2020	https://ibooks.ru
5.	ELS "IPRbooks"	1 year	Contract № 08/2020-ЗК	http://www.iprbookshop.ru/special
6.	Electronic Library System "BuckUP"	1 year	Contract № 05/2020	https://www.books-up.ru/
7.	ELS "Izdatel'stvo Lan'" [Fallow deer Publishing House]	1 year	Contract № 395/2020-ЭА	https://e.lanbook.com/

10. Logistical and technical support

Classrooms with equipment and technical educational medium tools for conducting lecture sessions, group and individual consultations, actual academic performance monitoring and interim assessment: St. Petersburg, Piskarevsky Prospekt, lit. AE (building

32), room 1, lit. R (building 9), room 18, 19 FSBEI HE NWSMU named after I.I. Mechnikov under the Ministry of Health of the Russian Federation.

Equipment: chalkboard; teacher's desk, teacher's chair, student desks, student chairs.

Technical educational medium: multimedia projector, teacher's laptop, system unit, monitor.

Special educational medium tools: Roger Pen (Individual Roger wireless pen-shaped transmitter), Roger MyLink (Roger Pen system signal receiver) (for students with hearing impairments); IntelliKeys (wired keyboard with matte black coating Russian Braille script), (St. Petersburg, Piskarevsky Prospekt, 47, lit. R (building 9), classroom № 18, 19, FSBEI HE NWSMU named after I.I. Mechnikov under the Ministry of Health of the Russian Federation).

Classrooms with equipment and technical educational medium tools for conducting practical sessions, group and individual consultations, ongoing academic performance monitoring and interim assessment: St. Petersburg, Piskarevsky Prospekt, 47, lit. AE (building 32), room 1, lit. R (building 9), room 18, 19 FSBEI HE NWSMU named after I.I. Mechnikov under the Ministry of Health of the Russian Federation.

Equipment: chalkboard; teacher's desk, teacher's chair, student desks, student chairs

Technical educational medium: multimedia projector, teacher's laptop, system unit, monitor.

Special educational medium tools: Roger Pen (Individual Roger wireless pen-shaped transmitter), Roger MyLink (Roger Pen system signal receiver) (for students with hearing impairments); IntelliKeys (wired keyboard with matte black coating Russian Braille script), (St. Petersburg, Piskarevsky Prospekt, 47, lit. R (building 9), classroom 18, 19, FSBEI HE NWSMU named after I.I. Mechnikov under the Ministry of Health of the Russian Federation).

Clinical facilities:

Clinical Infectious Diseases Hospital named after S.P. Botkin: rooms for independent work of students, equipped with computer hardware connected to the Internet and provided with access to the electronic information and educational environment of the University: St. Petersburg, Piskarevsky Prospekt, 47, lit AE (building.32); Mirgorodskaya , 3, building 3, 4th floor, 8th department. Contract - 179/2011-OA issued on 12.09.11

Rooms for individual study of students, equipped with computer hardware connected to the Internet and provided with access to the electronic information and educational environment of the University: St. Petersburg, Piskarevsky Prospekt, 47, lit. AE (building 32), classroom 1, lit. R (building 9), classroom 18, 19 FSBEI HE NWSMU named after I.I. Mechnikov under the Ministry of Health of the Russian Federation.

Appendix A

The Ministry of Health of the Russian Federation

Federal State Budgetary Educational Institution
of Higher Education
"North-Western State Medical University
named after I.I. Mechnikov"
under the Ministry of Health of the Russian Federation

(FSBEI HE NWSMU named after I.I. Mechnikov under the Ministry of Health of the Russian Federation)

ASSESSMENT MATERIALS

(for the actual monitoring of academic performance and interim assessment of students)

Specialty:	31.05.01 General Medicine
Focus:	Arrangement and delivery of primary health care to the adult population in medical organizations
Name of the academic course:	Infectious diseases

St. Petersburg, 2021

1. List of planned study outcomes of the academic course

Competency achievement indicator code	Study outcomes (assessment criteria)	Assessment means
AI-1 GPC-7	**Student knows** the main therapeutic and protective regimens and types of treatment	Control questions, case tasks, tests
	Student is able to assess the severity of the condition and prescribe a therapeutic and protective regime, choose a place of treatment	
	Student has the skill of assessing condition severity, choosing the place of treatment and prescribing a therapeutic and protective regimen	
AI-2 GPC-7	**Student knows** the main drug groups used in infectious pathology and the ways of their administration	Control questions, case tasks, tests
	Student is able to select medicines and determine their administration modes, taking into account the patient's condition	
	Student has the skill of selecting medicines and determining their administration modes	
AI-3 GPC-7	**Student knows** the main side effects of medicines used in the treatment of infectious diseases	Control questions, case tasks, tests
	Student is able to prevent the main side effects of medicines used in the treatment of infectious diseases.	
AI-4 GPC-7	**Student knows** the main medications, their dosage, modes of administration, regimens and side effects	Control questions, case tasks, tests
	Student knows how to identify the effectiveness and safety of treatment	
AI-1 PC-1	**Student knows** the main complications of infectious diseases and acute life-threatening conditions that occur in infectious diseases; patterns of emergency health care delivery	Control questions, case tasks, tests
	Student is able to identify the main complications of infectious diseases and acute life-threatening conditions that occur in infectious diseases	Control questions, case tasks, tests
AI-1 PC-2.1.	**Student knows** the procedure of collecting the medical history and physical examination of the patient	Control questions, case tasks, tests
	Student is able to collect medical history, conduct physical examination (examination, palpation, auscultation, blood pressure measurement, etc.); interpret survey data to identify the leading syndromes and to state a preliminary diagnosis	
	Student has the skill of collecting medical history	
AI-2 PC-2.2.	**Student knows** modern methods of clinical, laboratory, instrumental (including endoscopic, X-ray methods, ultrasound diagnostics) and pathoanatomical studies	Control questions, case tasks, tests
	Student is able to interpret survey data to identify the leading syndromes and to state a preliminary diagnosis; to determine the necessary minimum of appropriate examinations; interpret the data of laboratory and imaging tests, including pathoanatomical study	

	Student has the skill of stating a preliminary diagnosis and determining the necessary minimum of appropriate studies; the skill of interpreting laboratory and imaging tests data, including pathoanatomical study	
AI-3 PC-2.3	**Student knows** clinical guidelines on the health care delivery with consideration to the standards of health care	Control questions, case tasks, tests
	Student is able to identify the indications for referring a patient to medical specialists for consultation	
	Student has the skill of identifying indications for referring a patient to medical specialists for consultation	
AI-4 PC-2.4	**Student knows** the etiology and pathogenesis of the main infectious diseases; clinical aspect, the course features and the most common complications of infectious and parasitic diseases; the main infectious symptoms and syndromes	Control questions, case tasks, tests
	Student is able to group symptoms into syndromes, identify the leading syndromes specific to infectious diseases	
	Student has the skill to identify the leading symptoms and syndromes	
AI-5 PC-2.5	**Student knows** the diagnosis criteria of various infectious and parasitic diseases; standardized patterns of infectious diseases diagnosis and treatment (ICD, etc.)	Control questions, case tasks, tests
	Student is able to implement patterns of stating a diagnosis (primary, secondary, complications), taking into account the International Statistical Classification of Diseases	
	Student has the skill of stating a diagnosis (primary, secondary, complications) in accordance with the International Statistical Classification of Diseases	
AI-1 PC-3.1	**Student knows** the main drug groups used in the treatment of infectious diseases; treatment regimens for infectious and parasitic diseases	Control questions, case tasks, tests
	Student is able to prescribe medicinal treatment regimens, immunomodulatory therapy for various infectious and parasitic diseases in people of different age groups.	
	Student has the skill of prescribing common and immunomodulatory medications for various infectious and parasitic pathologies, taking into account the patients' age	
AI-2 PC-3.2	**Student knows** the administration modes, indications and contraindications for prescribing the main medications used in the treatment of infectious diseases	Control questions, case tasks, tests
	Student is able to identify indications, contraindications and administration modes of the main medications used in the treatment of infectious diseases	
	Student has the skill of determining the administration modes and indications for the appointment of the main medications used in the treatment of infectious diseases	
AI-1 PC-6.1	**Student knows** the arrangement patterns of preventive measures to control infectious diseases among the population; patterns and methods of conducting sanitary	Control questions, case tasks, tests

	and educational work among the population to prevent infectious diseases and promote a healthy lifestyle	
	Student is able to identify risk factors of main infectious diseases; to carry out preventive, hygienic and anti-epidemic measures; to carry out preventive measures to increase the body's resistance to various infections bu means of healthy nutrition, physical education, cold training, and promoting a healthy lifestyle	
	Student has the skill of carrying out preventive measures to control infectious diseases; patterns of conducting sanitary and educational work to promote a healthy lifestyle and rejection of bad habits	
AI-2 PC-6.2.	**Student knows** the epidemic process, the epidemiology of particularly significant infectious and parasitic diseases, and the implementation of anti-epidemic services	Control questions, case tasks, tests
	Student is able to carry out anti-epidemic services and protect the population in the focus of socially significant infections; use collective and personal protective equipment	
	Student has the skill to carry out anti-epidemic services and protect the population in the focus of socially significant infections: to use collective and personal protective equipment	
AI-3 PC-6.3	**Student knows** the patterns of active and passive immunization	Control questions, case tasks, tests
	Student is able to carry out preventive measures to control the incidence rate of infectious and parasitic diseases (physical education, cold training, nutrition, hygiene measures, immunization)	
	Student has the skill of carrying out preventive measures to control the incidence rate of infectious diseases; carrying out sanitary and educational work to promote a healthy lifestyle (physical education, abstinence from drugs, alcohol, smoking, etc.)	
AI-4 PC-6.4	**Student knows** the major anti-epidemic services aimed at preventing the infection transmission	Control questions, case tasks, tests
	Student is able to carry out major anti-epidemic measures aimed at preventing the infection transmission	
	Student has the skill of using personal protective equipment (gloves, masks).	

2. Examples of assessment means and criteria of actual monitoring

2.1. Examples of input control

Question title: Question № 1

What is used in the etiotropic therapy of herpes encephalitis and meningoencephalitis:

1. acyclovir 800 mg 5 times a day
2. valacyclovir 1.0 g 3 times a day
3. famciclovir 500 mg 3 times a day
4. acyclovir 10 mg/kg intravenously 3 times a day

Question title: Question № 2
The most common clinical course type of the gastrointestinal salmonellosis is:

1. gastric
2. gastroenteric
3. gastroenterocolytic
4. enteric

Assessment criteria, assessment scale *passed/not passed*

Grade	Description
"passed"	Student performs a complete understanding of the problem. All requirements for the task have been met
"not passed"	Student performs a lack of understanding of the problem. Many of requirements for the task have not been met. Answer is not provided. There was no attempt to solve the task

2.2. Examples of tests:

AI-1 GPC-7.1, AI-2 GPC-7.2, AI-3 GPC-7.3, AI-4 GPC-7.4
The most common clinical course type of the gastrointestinal salmonellosis is:

1. gastric
2. gastroenteric
3. gastroenterocolytic
4. enteric

AI-1 PC-1
14. HIV infection progression rates are:

1. high viral load, decreased CD4 lymphocyte count
2. low viral load, increased CD4 lymphocyte count
3. CD4 lymphocyte count is more than 500 cells/microlitre
4. viral load less than 50 copies/ml

AI-1 PC-2.1; AI-2 PC-2.2.
77. In the pre-icteric phase of viral hepatitis B, all of the following markers can be detected in the blood, with the exception of:

1. HBs antigen
2. anti-HBs
3. HBe antigen
4. anti-HBcorr IgM

AI-3 PC-2.3; AI-4 PC-2.4; AI-5 PC-2.5
124. The clinical diagnosis of what type of enterovirus infections is not very difficult:

1. Coxsackie virus and ECHO-virus diseases
2. acute respiratory disease
3. epidemic myalgia
4. epidemic hemorrhagic conjunctivitis

AI-1 PC-3.1
48**.** What is of primary importance in the treatment of severe chickenpox:

1. antibiotics
2. antiviral medications
3. hormones

4. non-steroidal anti-inflammatory drugs

AI-2 PC-3.2

35. What is duration of etiotropic therapy for typhoid-paratyphoid diseases:
1. 7-10 days
2. up to 10th day of normal body temperature
3. 12-14 days
4. up to 21st day of normal body temperature

AI-1 PC-6.1

36. The main method of preventing influenza is:
1. the use of disposable masks
2. vaccination
3. medication prevention in the epidemic season
4. fortification of food

AI-2 PC-6.2

57**.** Salmonellosis in Russia is most often caused by:
1. S.typhimurium
2. S.enteritidis
3. S.heidelberg
4. S.infantis

AI-3 PC-6.3

69. The main source of infection in diphtheria is:
1. carriers of Toxigenic Corynebacterium diphtheriae
2. people with atypical forms of diphtheria
3. people with toxic forms of diphtheria
4. people with diphtheria of the skin with localization on the face

AI-4 PC-6.4

36. The main method of preventing influenza is:
5. the use of disposable masks
6. vaccination
7. medication prevention in the epidemic season
8. fortification of food

Assessment criteria, scale of *test assessment*

Grade		**Description**
"passed with distinction"	5	Completed in full – 90%-100%
"passed with credit"	4	Completed not in full – 80%-89%
"passed"	3	Completed with contravention – 70%-79%
"failed"	2	Partially completed – 69% or less correct answers

2.3. Examples of case tasks

AI-1 GPC-7.1, AI-2 GPC-7.2, AI-3 GPC-7.3, AI-4 GPC-7.4

CASE TASK 64

Patient R., 28 years old, was admitted to the infectious diseases hospital with complaints of high body temperature (up to 40 ° C), headache, periodic vomiting, shortness of breath. On examination: Severe condition, the patient is emaciated, pale; acrocyanosis.

Peripheral lymph nodes are enlarged to 1-1.5 cm, mainly in the cervical region, dense, mobile, painless. Shortness of breath (RR - 28 per minute), hard breathing during auscultation. Heart tones are muffled. Pulse rate is 120 beats/min, low filling. The liver protrudes 2.5 cm from under the costal arch. The spleen is palpated. The patient is disoriented in place, time, and self. Right-sided hemiparesis was revealed. Generalized seizures occur periodically. There are no meningeal symptoms. A relative who accompanied the patient said that he was registered for HIV infection for 3 years. Condition worsened about 3 weeks ago, when headaches and fever appeared, followed by vomiting, seizures, and disorientation. Laboratory study of the immune status shows a significant decrease in CD4 lymphocyte count (up to 50 cells per microlitre). Clinical blood test: anemia, leukopenia. Computed tomography of the brain revealed several ring-shaped indurations in the cerebral cortex, surrounded by edematous tissue.

Questions:

1. What could cause the deterioration of the HIV patient's condition?
2. Diagnosis, with consideration of the stage of the disease.
3. Detailed plan of examination.
4. What is the patient management tactics and prognosis?
5. Deontological aspects in working with HIV-infected patients.

AI-1 PC-1

CASE TASK 69

Patient V., 22 years old, a student, was admitted to the emergency room of the infectious diseases hospital on the 2nd day of disease with a diagnosis of "hypertoxic form of influenza". The disease began acutely: chills, weakness, severe headache suddenly appeared, and body temperature rose to 39.5 ° C. She had no infectious contacts. On examination: extremely severe condition. Body temperature is 39.7 ° C. Adynamic, inhibited, pale, lip cyanosis. Confusional state. There is a profuse irregular hemorrhagic rash on the skin of the trunk, upper and lower limbs. The rash on the hands has a confluent nature, many constituents are "star–shaped". Heart tones are muffled. Blood pressure is 60/20 mm Hg. Respiration is vesicular. There is moderate hyperemia of the soft palate and the posterior pharyngeal wall, the tongue is dry, covered with a gray plaque. Abdomen is soft, painless. The liver and spleen are not enlarged. Meningeal symptoms are mildly positive. She has not urinated (according to relatives) for 12 hours.

Questions:

1. Preliminary diagnosis, taking into account the syndromic approach, and its justification.
2. The suspected causative agent of the disease, its specification.
3. The pathogenesis of the resulting complication.
4. Emergency treatment measures.
5. Consider the causes of the medical error and the disease for differential diagnosis.

AI-1 PC-2.1; AI-2 PC-2.2; AI-3 PC-2.3; AI-4 PC-2.4; AI-5 PC-2.5

CASE TASK 75

Nine college students were admitted to the infectious diseases hospital within three

hours. Upon admission, patients complained of nausea, vomiting, and loose stools. Almost at the same time, all had epigastric pain, nausea, 2 or 4 times vomiting of eaten food, and a little later – abundant liquid stool of a fecal nature without pathological impurities from 1 to 4 times. Many of the patients had chills. All the patients had dinner in the cafeteria. Upon admission to the hospital, all patients' condition was assessed as satisfactory. The body temperature in 7 patients was 37.2 – 37.6 ° C, others had the normal temperature. No one had a skin rash, and the skin tightness was normal. From the respiratory system – no pathology. No one had a reduction in blood pressure. Some patients had tongues covered with a whitish plaque. Most patients had pain in the epigastric and umbilical regions.
Questions:

1. Preliminary diagnosis, taking into account the syndromic approach, and its justification.
2. The suspected causative agent of the disease, its specification.
3. Methods of laboratory diagnostics.
4. Diseases for differential diagnosis.
5. Medical tactics.

AI-1 PC-3.1; AI-2 PC-3.2
CASE TASK 40

Patient M., 63 years old, a janitor, was admitted to the infectious diseases clinic on the 7th day of disease with complaints of severe weakness, high body temperature, severe pain in the lower back and calf muscles, headache, lack of appetite and jaundice of the skin and sclera, dark urine. Acute disease appeared with chills, headache, pain in the muscles of the legs and lower back, body temperature rose to 39.7 ° C. Icteric staining of the skin and sclera appeared on the 4th day of the disease. There was heavy nosebleed on the 5th day of the disease. There was severe condition upon admission. Body temperature is 37.3 ° C, patient is sluggish, inhibited, barely answers questions. Bright jaundice of the skin, mucosa and sclera. Massive hemorrhages in sclera. A profuse petechial rash was found on the body. There is vesicular respiration in the lungs. Pulse is 100 beats per minute, blood pressure is 90/60 mm Hg. The tongue is dry. The abdomen is soft, painless, and the enlarged liver and spleen are palpable. He barely urinates. 300 ml of dark urine has been excreted for the last 24 hours.
Questions:

1. Preliminary diagnosis, taking into account the syndromic approach, and its justification.
2. The suspected causative agent of the disease, its specification.
3. The pathogenesis of the disease.
4. Medical tactics.
5. Prevention of the disease.

AI-1 PC-6.1; AI-2 PC-6.2; AI-3 PC-6.3; AI-4 PC-6.4
CASE TASK 57

The patient is 36 years old. Acute disease took place during the flu epidemic after a sharp exposure to cold. Temperature is 40 ° C, severe weakness, headache, chills, cough with sputum and admixtures of red blood, runny nose. He has been ill for the second day, severe

condition. There are copious, diffuse wet wheezes in the lungs on both sides. Respiratory rate is 36 beats per minute. Heart tones are muffled, pulse is 140 per minute. Blood pressure is 90/50 mm Hg.
Questions:

1. Preliminary diagnosis, taking into account the syndromic approach, and its justification.
2. The suspected causative agent of the disease, its specification.
3. Diseases for differential diagnosis.
4. Therapeutic tactics.
5. Preventive measures.

Assessment criteria, scale of assessment of *case tasks*

Grade		**Description**
"passed with distinction"	5	Case solving is detailed, consistent, competent, with theoretical justifications, with necessary schematic images and visual presentations, with correct and fluent command of terminology; the answers to additional questions are correct, clear
"passed with credit"	4	Case solving is detailed, but not logical enough, with isolated particular errors, some difficulties in theoretical justification, schematic images and visual presentations, the answers to additional questions are correct, but not clear enough
"passed"	3	Case solving is not complete enough, inconsistent, with errors, weak theoretical justification, with significant difficulties and errors in schematic representations and visual presentations, the answers to additional questions are not clear enough, with errors in details
"failed"	2	Case solving is incomplete, inconsistent, with gross errors, without theoretical justification, without schematic images and visual presentations, or with a large number of errors, the answers to additional questions are incorrect or missing

2.4. Examples of control questions

AI-1 GPC-7.1, AI-2 GPC-7.2, AI-3 GPC-7.3, AI-4 GPC-7.4
Question 4: Acute and chronic dysentery. Etiology, epidemiology, pathogenesis, classification, clinical aspect, complications, prognosis, diagnosis, differential diagnosis, treatment, prevention.
AI-1 PC-1
Question 9: Cholera. Etiology, epidemiology, pathogenesis, classification, clinical aspect, complications, prognosis, diagnosis, differential diagnosis, treatment, prevention.
AI-1 PC-2.1; AI-2 PC-2.2
Question 3: Diagnosis patterns and methods in infectious diseases. Rules for the collection of medical and epidemiological history, clinical examination protocol. Specific study methods – indications and rules for collecting material in conducting parasitological, bacteriological, virological, molecular biological, and serological studies, interpretation of the results.
AI-3 PC-2.3
Question 6: Salmonella. Etiology (classification of salmonella), epidemiology, pathogenesis, classification, clinical aspect, complications, prognosis, diagnosis, differential diagnosis, treatment, prevention.
AI-4 PC-2.4

Question 5: Amoebiasis. Etiology, epidemiology, pathogenesis, classification, clinical aspect, complications, prognosis, diagnosis, differential diagnosis, treatment, prevention.

AI-5 PC-2.5

Question 8: Botulism. Etiology, epidemiology, pathogenesis, classification, clinical aspect, complications, prognosis, diagnosis, differential diagnosis, treatment, prevention.

AI-1 PC-3.1; AI-2 PC-3.2

Question 10: Typhoid fever. Etiology, epidemiology, pathogenesis, classification, clinical aspect, complications, prognosis, diagnosis, differential diagnosis, treatment, prevention.

AI-1 PC-6.1; AI-2 PC-6.2; AI-3 PC-6.3; AI-4 PC-6.4

Question 1: The structure of the infection service. The procedure for hospitalization of an infectious patient and indications for hospitalization. The operating mode and structure of the infectious diseases hospital. Preventive patterns of infectious diseases (emergency and planned prevention, specific and non-specific).

Question 7: Food-borne toxicoinfections. Etiology, epidemiology, pathogenesis, classification, clinical aspect, complications, prognosis, diagnosis, differential diagnosis, treatment, prevention.

Question 2: The concept of the infectious process. The main properties of pathogens (pathogenicity, virulence, adhesiveness, invasiveness, toxigenicity, etc.) Factors that determine the resistance mechanisms of a macroorganism. The concept of immunity. Classification of infectious diseases.

Assessment criteria, assessment scale *for control questions*

Grade		**Description**
"passed with distinction"	5	Student knows all the educational material, understands it perfectly and has firmly mastered it. Student gives correct, conscious and confident answers to questions (within the program). Student uses correct standard language and does not make mistakes in verbal answers.
"passed with credit"	4	Student knows all the required educational material, understands it well and has firmly mastered it. Questions (within the program) are answered without difficulty. Student uses standard language in verbal answers and does not make mistakes.
"passed"	3	Student knows the core educational material. Student answers questions (within the program) uneasily. Student makes mistakes in the presentation of the material and in the construction of speech during verbal answers.
"failed"	2	Student does not know most of the educational material, has a tend to uncertainly answer merely teacher's guiding questions. Student makes frequent and gross mistakes in verbal answers.

3. Procedure of conducting actual monitoring

Actual monitoring of academic course performance is provided by means of case tasks and control questions.

4. Examples of materials and criteria for interim assessment

4.1. Indicative list of control questions *to prepare for the examination*:

AI-1 GPC-7.1, AI-2 GPC-7.2, AI-3 GPC-7.3, AI-4 GPC-7.4

Question 4: Acute and chronic dysentery. Etiology, epidemiology, pathogenesis, classification,

clinical aspect, complications, prognosis, diagnosis, differential diagnosis, treatment, prevention.

AI-1 PC-1

Question 9: Cholera. Etiology, epidemiology, pathogenesis, classification, clinical aspect, complications, prognosis, diagnosis, differential diagnosis, treatment, prevention.

AI-1 PC-2.1; AI-2 PC-2.2

Question 3: Diagnosis patterns and methods in infectious diseases. Rules for the collection of medical and epidemiological history, clinical examination protocol. Specific study methods – indications and rules for collecting material in conducting parasitological, bacteriological, virological, molecular biological, and serological studies, interpretation of the results.

AI-3 PC-2.3

Question 6: Salmonella. Etiology (classification of salmonella), epidemiology, pathogenesis, classification, clinical aspect, complications, prognosis, diagnosis, differential diagnosis, treatment, prevention.

AI-4 PC-2.4

Question 5: Amoebiasis. Etiology, epidemiology, pathogenesis, classification, clinical aspect, complications, prognosis, diagnosis, differential diagnosis, treatment, prevention.

AI-5 PC-2.5

Question 8: Botulism. Etiology, epidemiology, pathogenesis, classification, clinical aspect, complications, prognosis, diagnosis, differential diagnosis, treatment, prevention.

AI-1 PC-3.1; AI-2 PC-3.2

Question 10: Typhoid fever. Etiology, epidemiology, pathogenesis, classification, clinical aspect, complications, prognosis, diagnosis, differential diagnosis, treatment, prevention.

AI-1 PC-6.1; AI-2 PC-6.2; AI-3 PC-6.3; AI-4 PC-6.4

Question 1: The structure of the infection service. The procedure for hospitalization of an infectious patient and indications for hospitalization. The operating mode and structure of the infectious diseases hospital. Preventive patterns of infectious diseases (emergency and planned prevention, specific and non-specific).

Question 7: Food-borne toxicoinfections. Etiology, epidemiology, pathogenesis, classification, clinical aspect, complications, prognosis, diagnosis, differential diagnosis, treatment, prevention.

Question 2: The concept of the infectious process. The main properties of pathogens (pathogenicity, virulence, adhesiveness, invasiveness, toxigenicity, etc.) Factors that determine the resistance mechanisms of a macroorganism. The concept of immunity. Classification of infectious diseases.

Assessment criteria, assessment scale *for control questions*

Grade		**Description**
"passed with distinction"	5	Student provides an exhaustive answer to a question (without reading written tips); knows the basic concepts within the framework of the issue under discussion; answers additional questions presenting knowledge of basic disciplines and navigating through all the material of the program; uses literary correct language
"passed with credit"	4	Student gives an exhaustive answer to a question (without reading written tips); knows the basic concepts and answers additional questions within the framework of the issue under discussion; uses literary correct language
"passed"	3	Student gives an answer to a question (without reading written tips); answers additional questions using the teacher's suggestions; poorly navigates through the basic concepts within the question; makes mistakes in the presentation of the material and in the construction of speech

Grade		Description
"failed"	2	Student does not answer the question, reads written tips or answers incorrectly; does not answer additional questions or answers uncertainly, using the teacher's suggestions; makes mistakes in the presentation of the material and the construction of speech

4.2. Examples *of case tasks*:

AI-1 GPC-7.1, AI-2 GPC-7.2, AI-3 GPC-7.3, AI-4 GPC-7.4

CASE TASK 64

Patient R., 28 years old, was admitted to the infectious diseases hospital with complaints of high body temperature (up to 40 ° C), headache, periodic vomiting, shortness of breath. On examination: severe condition, the patient is emaciated, pale; acrocyanosis. Peripheral lymph nodes are enlarged to 1-1.5 cm, mainly in the cervical region, dense, mobile, painless. Shortness of breath (RR - 28 per minute), hard breathing during auscultation. Heart tones are muffled. Pulse rate is 120 beats/min, low filling. The liver protrudes 2.5 cm from under the costal arch. The spleen is palpated. The patient is disoriented in place, time, and self. Right-sided hemiparesis was revealed. Generalized seizures occur periodically. There are no meningeal symptoms. A relative who accompanied the patient said that he was registered for HIV infection for 3 years. Condition worsened about 3 weeks ago, when headaches and fever appeared, followed by vomiting, seizures, and disorientation. Laboratory study of the immune status shows a significant decrease in CD4 lymphocyte count (up to 50 cells per microlitre). Clinical blood test: anemia, leukopenia. Computed tomography of the brain revealed several ring-shaped indurations in the cerebral cortex, surrounded by edematous tissue.

Questions:

6. What could cause the deterioration of the HIV patient's condition?
7. Diagnosis, with consideration of the stage of the disease.
8. Detailed plan of examination.
9. What is the patient management tactics and prognosis?
10. Deontological aspects in working with HIV-infected patients.

AI-1 PC-1

CASE TASK 69

Patient V., 22 years old, a student, was admitted to the emergency room of the infectious diseases hospital on the 2nd day of disease with a diagnosis of "hypertoxic form of influenza". The disease began acutely: chills, weakness, severe headache suddenly appeared, and body temperature rose to 39.5 ° C. She had no infectious contacts. On examination: extremely severe condition. Body temperature is 39.7 ° C. Adynamic, inhibited, pale, lip cyanosis. Confusional state. There is a profuse irregular hemorrhagic rash on the skin of the trunk, upper and lower limbs. The rash on the hands has a confluent nature, many constituents are "star–shaped". Heart tones are muffled. Blood pressure is 60/20 mm Hg. Lung respiration is vesicular. There is moderate hyperemia of the soft palate and the posterior pharyngeal wall, the tongue is dry, covered with a gray plaque. Abdomen is soft, painless. The liver and spleen are not enlarged. Meningeal symptoms are mildly positive. She has not urinated (according to relatives) for 12 hours.

Questions:

6. Preliminary diagnosis, taking into account the syndromic approach, and its justification.

7. The suspected causative agent of the disease, its specification.
8. The pathogenesis of the resulting complication.
9. Emergency treatment measures.
10. Consider the causes of the medical error and the disease for differential diagnosis.

AI-1 PC-2.1; AI-2 PC-2.2; AI-3 PC-2.3; AI-4 PC-2.4; AI-5 PC-2.5
CASE TASK 75

Nine college students were admitted to the infectious diseases hospital within three hours. Upon admission, patients complained of nausea, vomiting, and loose stools. Almost at the same time, all had epigastric pain, nausea, 2 or 4 times vomiting of eaten food, and a little later – abundant liquid stool of a fecal nature without pathological impurities from 1 to 4 times. Many of the patients had chills. All the patients had dinner in the cafeteria. Upon admission to the hospital, all patients' condition was assessed as satisfactory. The body temperature in 7 patients was 37.2 – 37.6 ° C, others had the normal temperature. No one had a skin rash, and the skin tightness was normal. From the respiratory system – no pathology. No one had a reduction in blood pressure. Some patients had tongues covered with a whitish plaque. Most patients had pain in the epigastric and umbilical regions.
Questions:

6. Preliminary diagnosis, taking into account the syndromic approach, and its justification.
7. The suspected causative agent of the disease, its specification.
8. Methods of laboratory diagnostics.
9. Diseases for differential diagnosis.
10. Medical tactics.

AI-1 PC-3.1; AI-2 PC-3.2
CASE TASK 40

Patient M., 63, a janitor, was admitted to the infectious diseases clinic on the 7th day of his disease with complaints of severe weakness, high body temperature, severe pain in the lower back and calf muscles, headache, lack of appetite and jaundice of the skin and sclera, dark urine. Acute disease appeared with chills, headache, pain in the muscles of the legs and lower back, body temperature rose to 39.7 ° C. Icteric staining of the skin and sclera appeared on the 4th day of the disease. There was heavy nosebleed on the 5th day of the disease. There was severe condition upon admission. Body temperature is 37.3 ° C, patient is sluggish, inhibited, barely answers questions. Bright jaundice of the skin, mucosa and sclera. Massive hemorrhages in sclera. A profuse petechial rash was found on the body. There is vesicular respiration in the lungs. Pulse is 100 beats per minute, blood pressure is 90/60 mm Hg. The tongue is dry. The abdomen is soft, painless, and the enlarged liver and spleen are palpable. He barely urinates. 300 ml of dark urine has been excreted in the last 24 hours.
Questions:

6. Preliminary diagnosis, taking into account the syndromic approach, and its justification.
7. The suspected causative agent of the disease, its specification.

8. The pathogenesis of the disease.
9. Medical tactics.
10. Prevention of the disease.

AI-1 PC-6.1; AI-2 PC-6.2; AI-3 PC-6.3; AI-4 PC-6.4

CASE TASK 57

The patient is 36 years old. Acute disease took place during the flu epidemic after a sharp exposure to cold. Temperature is 40 ° C, severe weakness, headache, chills, cough with sputum and admixtures of red blood, runny nose. He has been ill for the second day, severe condition. There are copious, diffuse wet wheezes in the lungs on both sides. Respiratory rate is 36 beats per minute. Heart tones are muffled, pulse is 140 per minute. Blood pressure is 90/50 mm Hg.

Questions:

6. Preliminary diagnosis, taking into account the syndromic approach, and its justification.
7. The suspected causative agent of the disease, its specification.
8. Diseases for differential diagnosis.
9. Therapeutic tactics.
10. Preventive measures.

Assessment criteria, scale of assessment of *case tasks*

Grade		Description
"passed with distinction"	5	Student competently considers the task specification, identifies the existing symptoms and syndromes of the disease; correctly states a diagnosis using a syndromic approach; answers all questions within the task, as well as additional questions, presenting knowledge of basic disciplines and navigating through all the material of the program; uses literary correct language.
"passed with credit"	4	Student considers the task specification, identifies the existing symptoms and syndromes of the disease; correctly or incompletely states a diagnosis using a syndromic approach; answers all questions within the task; answers additional questions using the teacher's suggestions; uses literary correct language.
"passed"	3	Student states a diagnosis without using a syndromic approach; does not identify existing symptoms and syndromes; does not fully answer the questions assigned to the task; answers additional questions using the teacher's suggestions; makes mistakes in the presentation of the material and in the construction of speech.
"failed"	2	Student states an incorrect or incomplete diagnosis; does not identify existing symptoms and syndromes; does not answer all the questions assigned to the task or answers some of them incorrectly; cannot answer teacher's additional questions within the task; cannot use the teacher's tips; makes mistakes in the presentation of the material and in the construction of speech.

Assessment criteria, *final assessment scale*

Grade	Description

Grade		Description
"passed with distinction"	5	Student answered the theoretical question(s) correctly. Student presented excellent knowledge in the framework of the educational material. Student performed the practical task(s) correctly. Student presented excellent skills and proficiency in applying the acquired knowledge and skills in solving tasks within the framework of the educational material. Student answered all the additional questions.
"passed with credit"	4	Student answered the theoretical question(s) with minor inaccuracies. Student presented fine knowledge in the framework of the educational material. Student performed the practical task(s) with minor inaccuracies. Student presented fine skills and proficiency in applying the acquired knowledge and skills in solving tasks within the framework of the educational material. Student answered most of the additional questions.
"passed"	3	Student answered the theoretical question(s) with significant inaccuracies. Student presented satisfactory knowledge within the framework of the training material. Student performed the practical task(s) with significant inaccuracies. Student presented satisfactory skills and proficiency in applying the acquired knowledge and skills in solving tasks within the framework of the educational material. Student made many inaccuracies when answering additional questions.
"failed"	2	When answering a theoretical question(s) and performing a practical task(s), student presented an insufficient level of knowledge and skills in solving tasks within the framework of the educational material. There were many incorrect answers when answering additional questions.

5. Procedure of interim assessment

Interim assessment in the course is conducted by exam. Exam includes two theoretical questions and two case tasks. Student pulls out an exam ticket, and after 40 minutes of preparation, goes to answer.