



APPROVED  
EMD decision

" 15 " 11 2021

Protocol No. 6

Chairman of the EMC, Vice Rector,  
candidate of pedagogical sciences,  
associate professor Apezova D.U.



## SYLLABUS by discipline

### CC. 3.8.18. INFECTIOUS DISEASES

For students of the educational program, higher professional education in the specialty 560001 "General Medicine" (5-year education) in the specialty "Doctor"

Type of study work	Total hours
course	5
Semester	10
Number of weeks	18
Credits	4
The total complexity of the discipline	120
Classroom/practical studies (PS)	72
Student Independent Work (SIW)	48
Forms of control	
current control	Testing, oral questioning, written test
Frontier control	Testing
Midterm	Testing
Final control	exam
Semester rating by discipline:	Point-rating system

### Information about the teacher of the academic discipline

Full Name	Rahimdinova Aida Tilekovna
Post	Teacher
Academic degree	
Academic title	
Email address	
Location of the department (address)	KR, Bishkek, st. Shabdan Baatyr 128, floor 2, room 6
Telephone	0700847xxx
Consultation hours	11.00-13.30

### Characteristics of the academic discipline

*To study the discipline*, this course provides an in-depth study of the theoretical and methodological foundations of the specialty "Infectious diseases", improving practical training in the diagnosis and treatment of infectious pathology, allows you to expand the knowledge about the etiology, pathogenesis, clinical manifestations of the main diseases of infectious diseases; improve the skills of recognition of infectious diseases, interpretation of instrumental and laboratory methods of examination of patients; to form the skills to provide highly qualified emergency care to infectious patients based on the principles of

evidence-based medicine. Students are taught early recognition of an infectious disease during examination of a patient, differential diagnosis with other infectious and especially non-infectious diseases occurring with similar symptoms, based on their leading syndromes, training in choosing optimal methods of laboratory and instrumental examination to confirm or cancel the diagnosis of an infectious disease; providing medical care at the prehospital stage with subsequent referral to an infectious disease doctor (in an infectious hospital) of patients with nosological forms: typhoid and paratyphoid, viral hepatitis, dysentery and salmonellosis (severe forms), botulism, amoebiasis, meningococcal infection, leptospirosis, epidemic typhus (Brill-Zinsser disease), arbovirus infections (hemorrhagic fevers), diphtheria, malaria, brucellosis, tetanus, tularemia, plague, cholera, HIV infection, leishmaniasis, polio, rabies, helminthiasis; timely recognition of dehydration, infectious-toxic, anaphylactic shocks, collapse, acute respiratory failure, croup, acute liver failure, acute renal failure, brain edema, bulbar disorders in botulism, provision of emergency medical care at the prehospital and hospital stages and determination of tactics for further medical care in emergency conditions.

#### **Prerequisites of the discipline:**

- Fundamentals of clinical examinations in internal diseases
- Fundamentals of clinical examinations in pediatrics
- Anesthesiology, intensive care, emergency conditions
- Family medicine
- Neurology with the basics of neurosurgery
- Forensic medicine with jurisprudence

#### **Postrequisites of the discipline:**

- General physiotherapy, VC and physical therapy
- Disaster Medicine
- Therapy
- Pediatrics
- Surgery
- Obstetrics and gynecology

#### **Learning outcomes of the discipline according to the RO GPP**

The study of the discipline of microbiology, virology and immunology will contribute to the achievement of learning outcomes (RE) GEP:

**RE - 8-** Interpret, analyze and evaluate data from clinical, laboratory and instrumental diagnostic methods, make a treatment plan, including emergency care, taking into account urgent and priority signs of the disease.

Within the framework of this discipline, it is expected to achieve the following results of teaching the discipline, which are implemented within the framework of achieving competencies:

**PC-10** - is capable and ready to carry out preventive measures to prevent infectious, parasitic and non-communicable diseases;

#### **Content of the discipline**

<b>№№</b>	<b>Name of topics</b>
1.	General issues of infectious pathology
2.	Organization of the work of the infectious service
3.	General characteristics of the infectious process
4.	Mechanisms of bacterial and viral infections. The role of non-specific and specific mechanisms of macroorganism protection
5.	Clinical aspects of the infectious process. Clinical and pathogenetic characteristics of periods of the infectious process.
6.	Forms of the infectious process. Infectious process under conditions of altered reactivity and resistance of the macroorganism
7.	The main methods of diagnosis of infectious diseases
8.	General principles of treatment of infectious patients; regime of infectious patients; care of infectious patients; nutrition of patients; medical treatment; outpatient care for infectious patients
9.	Intestinal infections

10.	Typhoid fever and paratyphs. Etiology. Epidemiology. Pathogenesis. Clinical and laboratory diagnostics
11.	Dysentery. Etiology. Modern etiological structure of shigellosis. Epidemiology. Sources of infection and transmission routes. Pathogenesis and clinic. Laboratory methods. Indications for rectoromanoscopy. Treatment of patients with dysentery. Possibilities of computer diagnostics of shigellosis
12.	Escherichiosis. Epidemiology, clinic, diagnosis of escherichiosis.
13.	Salmonellosis. Characteristics of pathogens. Sources of infections, leading transmission factors. Pathogenesis. Clinical classification. Treatment of patients with salmonellosis. Anti-epidemic measures in the focus
14.	Food toxicoinfections. Substantiation of the diagnosis and treatment of patients. Botulism. Features of epidemiology and clinic. Indications for hospitalization of patients in the intensive care unit. Specific diagnostics. Serotherapy and pathogenetic treatment. Prevention
15.	Intestinal yersiniosis, pseudotuberculosis. Features of pathogens and the epidemic process. Clinical and laboratory diagnostics. Campylobacteriosis.
16.	Amoebiasis. Etiology and epidemiology. Pathogenesis. Clinic and complications. Extra-intestinal amoebiasis (amoebic hepatitis, amoebic pneumonia, amoebic abscess of the liver and lungs). The principle of treatment
17.	Balantidiosis: diagnosis, treatment.
18.	Enterovirus infections. Sources of infection, transmission routes. Seasonality, the possibility of epidemic outbreaks. Clinical forms: enterovirus diarrhea, herpangina, serous meningitis, hemorrhagic conjunctivitis. Issues of treatment of patients
19.	Rotavirus infection. Source of infection and transmission routes. Features of the clinic: a combination of symptoms of gastroenteritis and intoxication due to damage to the upper respiratory tract. Laboratory diagnostic capabilities. Treatment. Anti-epidemic measures in the hearth
20.	Dysbiosis, diagnosis, treatment.
21.	Respiratory tract infections
22.	Influenza and acute respiratory viral infections. Etiological and epidemiological features of influenza. The clinic and complications of influenza. Epidemiology and clinic of parainfluenza, adenovirus and respiratory syncytial infections. Viral croup. Treatment of patients with acute respiratory viral infections. Specific and non-specific prevention. Mycoplasma infection. Clinic, diagnosis, treatment. Algorithm of differential diagnosis of diseases in patients with runny nose, cough, pneumonia and fever.
23.	Diphtheria. The relevance of the problem of diphtheria in the country. Features of the pathogen. Epidemiology. Damage to systems and organs in diphtheria. Features of diphtheria in vaccinated. Complications and causes of deaths. Laboratory diagnostics. Treatment of patients with diphtheria. Principles of dosing and administration of anti-diphtheria antitoxic serum. Active immunization against diphtheria. Events in the hearth.
24.	Sore throats. Etiology and epidemiology. Clinic: general and local symptoms. Complications. Diagnostics. The obligation of bacteriological examination of the oropharyngeal smear for flora and Leffler's bacillus. Infectious mononucleosis. Clinical and laboratory diagnostics. Treatment. The algorithm of differential diagnosis in patients with fever and sore throat.
25.	Meningococcal infection. Sources of infection and transmission routes. Clinic, clinical and pathogenetic classification of the disease. Meningococemia. Infectious-toxic shock. Etiotropic and pathogenetic therapy. Differential diagnosis with meningitis of a different nature, influenza, hemorrhagic vasculitis. Events in the epidochage.
26.	Ornithosis. Etiology and epidemiology. Clinical and laboratory diagnostics of chlamydia. Treatment of patients with ornithosis
27.	Vector-borne infections
28.	Rickettsiosis. Classification. Typhus and Brill's disease. Epidemiology, pathogenesis, clinic, laboratory diagnostics. Treatment. Activities in the focus of typhus. Endemic or rat typhus. Epidemiology, clinic and diagnostics. Ku-fever. Primary natural and secondary anthropurgical foci of infection. Transmission paths. Clinic, features of respiratory damage. Diagnosis, treatment and prevention. Other rickettsioses: Marseille fever, smallpox rickettsiosis, tsutsugamushi fever
29.	Tick-borne borreliosis. Epidemiology, clinic and laboratory diagnostics (detection of borrelia in smears and a thick drop of blood). Treatment. Systemic tick-borne borreliosis is Lyme disease. Natural focality. Clinic, primary affect. Treatment and prevention of complications

30.	Hemorrhagic fevers. Hemorrhagic fever with renal syndrome (HFRS). Clinic, diagnosis, treatment. Prevention. Crimean and Omsk hemorrhagic fevers.
31.	Viral encephalitis and encephalomyelitis. Japanese (mosquito, autumn) encephalomyelitis. Diagnosis and treatment.
32.	Malaria. Types of pathogens. Epidemiology of the disease. Imported malaria. Pathogenesis and immunity in malaria. Clinic, clinical classification. Complications of malaria. Malarial coma. Diagnostics and differential diagnostics. Treatment of malaria, characteristics of antimalarial drugs. Issues of chemoprophylaxis.
33.	Viral hepatitis
34.	Features of the epidemiology of viral hepatitis. Pathogenesis of the leading syndromes: cytolysis, cholestasis, mesenchymal-inflammatory. Clinical classification and characteristics of the main forms of the disease. Laboratory diagnostics: biochemical methods and determination of specific markers.
35.	The algorithm of differential diagnosis of diseases occurring with jaundice. Possibilities of computer diagnostics of viral hepatitis. Treatment of patients with hepatitis. Intensive therapy for the development of hepatic coma. Chronic hepatitis and cirrhosis of the liver
36.	Zoonotic infections
37.	Brucellosis. Sources of infection and transmission routes, occupational morbidity. Clinical classification. Damage to organs and systems in brucellosis. Laboratory diagnostics. Treatment of patients with brucellosis. Outcomes of the disease. Post - hospital observed
38.	Tularemia. Sources of infection and transmission routes. Clinical forms of tularemia, their characteristics. Laboratory diagnostics (bioassay, serological methods, tularin samples). Treatment and prevention.
39.	Leptospirosis. Pathogens and sources of infection. Natural and synanthropic foci. Early clinical signs of leptospirosis, clinic of kidney, liver, central nervous system damage. Diagnostics. Treatment of patients with leptospirosis. Prevention.
40.	Infections of the outer integuments
41.	Tetanus. Etiology and epidemiology. Clinical classification and characteristics of generalized and local tetanus. Features of treatment (protective regime, serotherapy, pathogenetic therapy). Active and passive immunoprophylaxis
42.	of Erysipelas. Etiology and epidemiology. Characteristics of clinical forms. Differential diagnosis and treatment
43.	Rabies. Etiology and epidemiology. Clinic, characteristics of the stages of the disease. Prevention of rabies. Indications for vaccination. Organization of anti-labor assistance to the population.
44.	HIV infection. Properties of the pathogen. The role of infected persons as sources of infection. Distribution paths. Clinical classification and characteristics of the stages of the disease. Laboratory diagnostics of HIV infection, the timing of the appearance of antibodies in humans after infection. Treatment. Forecast. Recommendations for the care of AIDS patients and seropositive persons. The work of an anonymous advisory cabinet.
45.	Anthrax. Stability of vegetative and spore forms of the pathogen. Sources of infection and ways of infection; occupational morbidity. Diagnostic methods: bacteriological, infection of laboratory animals, sample with anthraxin. Differential diagnosis with carbuncles, erysipelas, sepsis. Treatment and prevention.
46.	Foot-and-mouth disease. Sources and factors of transmission of infection. Clinic and diagnostics. Treatment and prevention.
47.	Particularly dangerous infections
48.	Cholera. Etiology, stability of cholera vibrio in the external environment. Sources of infection and transmission factors. Pathogenesis of diarrhea and water-lectrolytic disorders. Clinic, classification of cholera by degree of dehydration. Features of cholera El Tor. Substantiation of the diagnosis, the significance of the cholera epidemic situation. Methods of laboratory diagnostics. Principles of pathogenetic therapy depending on the degree of dehydration of the patient; complications of infusion therapy. Antibacterial therapy of patients and vibration carriers. Elimination of the epidermis. Emergency prevention, indications. Quarantine measures to combat cholera. The device and mode of cholera and dispensary hospital
49.	Plague. Etiology and epidemiology. Natural foci of the plague, their spread. Fleas as carriers of the pathogen. Characteristics of clinical forms of plague. Outcomes of the disease. Laboratory diagnostics, rules for taking the material and sending it to the laboratory.

	Differential diagnosis with tularemia, lymphadenitis, sepsis. Treatment. Quarantine measures for the plague.
50.	Yellow fever, the possibility of importation to non-endemic zones. Natural and urban centers. Immunity. The clinical picture of the periods of the disease. Complications, prognosis. Diagnosis and treatment. Prevention. Quarantine measures.
51.	Natural smallpox. Smallpox of monkeys.
52.	Transmissible spongiform encephalopathies
53.	Kuru, Kreutzfeld-Jacobs disease. Etiology, epidemiology, clinic, diagnosis, treatment, prevention
54.	Tropical diseases. Helminthiasis.
55.	Especially dangerous hemorrhagic fevers Lassa, Marburg, Ebola. Etiology and epidemiology. Clinic, characteristics of the stages of the disease. About
56.	Leishmaniasis. Etiology and epidemiology. Characteristics of clinical forms. Differential diagnosis and treatment
57.	Helminthiasis. Clinical picture, diagnosis and treatment of major helminthiasis (ascariasis, trichocephalosis, enterobiosis, teniosis, teniarinhosis, diphyllbothriosis).
58.	Laboratory and functional diagnostics of infectious diseases
59.	Rules for the collection of material for bacteriological and biochemical studies. Interpretation of the survey results obtained
60.	Indications for the treatment of an infectious patient at home. Post-hospital supervision and rehabilitation of convalescents
61.	The main areas of work of the doctor of the KEYES, the development of documentation in the KEYES.
62.	Differential diagnosis of infectious diseases.
63.	Differential diagnosis of diseases with diarrheal syndrome.
64.	Differential diagnosis of diseases with respiratory syndrome
65.	Differential diagnosis of diseases with lymphadenopathy syndrome
66.	Differential diagnosis of diseases with exanthemic syndrome
67.	Urgent conditions in infectious diseases
68.	Differential diagnosis of comatose states.
69.	Hepatic coma. Treatment of patients in a state of hepatic coma.
70.	Malarial coma as a complication of tropical malaria. Emergency care.
71.	Infectious-toxic (endotoxic) shock. Its development in the septic course of infections due to gram-negative bacteria (meningococcal infection, salmonellosis, dysentery, etc.). Hemodynamic disorders, pathogenesis of cardiovascular insufficiency. Clinic of shock. Complications: swelling of the brain, kidney damage, liver. Principles and methods of treatment of patients with infectious and toxic shock.
72.	Violation of the water-electrolyte and acid-base balance in food toxicoinfections, salmonellosis, cholera. Intensive therapy of water-electrolyte disorders. Complications of infusion therapy
73.	Hemorrhagic syndrome. The pathogenesis of its development in viral hepatitis, leptospirosis, meningococcal infection, hemorrhagic fevers. DIC syndrome as a complication of infectious diseases. Principles of treatment
74.	Assistance in acute allergic reactions. Principles and methods of treatment of anaphylactic shock, skin allergic reactions.
75.	Acute renal failure syndrome in infectious diseases and its treatment. Principles and methods of treatment of acute respiratory failure in infectious pathology.

### **List of main and additional literature:**

#### **Main literature:**

Infectious diseases: national hands. / edited by N. D. Yushchuk, Yu. Ya. Vengerov. – Moscow: GEOTAR-Media, 2018.

#### **Additional literature:**

1. Infectious diseases and epidemiology: [study. for medical universities] / V. I. Pokrovsky, S. G. Pak, N. I. Briko, B. K. Danilkin. – 3rd ed., ispr. and add. – Moscow: GEOTAR-Media, 2013
2. Atlas of Infectious Diseases: studies. manual for medical universities [S. V. Burova et al.]; edited by V. I. Bestev – Moscow: GEOTAR-Media, 2014

#### **Internet resources:**

<http://marc.rsmu.ru:8020/marcweb2/Default.asp>  
<http://e.lanbook.com>  
<http://www.edu.ru>  
<http://www.medicina.ru>  
<http://www.infectology.ru>  
[http //www.journals.uchicago.edu/JAD/home.html](http://www.journals.uchicago.edu/JAD/home.html)

### Monitoring and evaluation of learning outcomes

#### The content of the rating system for assessing student performance

The rating assessment of students' knowledge in each academic discipline, regardless of its total labor intensity, is determined on a 100 (one hundred) - point scale and includes current, boundary, intermediate and final control.

The distribution of rating scores between types of control is established in the following ratio (according to the table of the score-rating system of assessments):

Form of control				
current (CC)*	boundary control (BC)**	mid-term exams (MC)***	Final /exam (FE)	Discipline Rating (RD)
0-100 points	0-100 points	0-100 points	0-100 points	0-100 points, with the translation of points into a letter designation

Note:

\*  $TK(middle) = \frac{\sum_1^n \times point}{\sum_1^n}$ , where n is the number of types of classroom and extracurricular work of students in the discipline;

\*\*  $PK(middle) = \frac{\sum_1^n credit \times point}{\sum_1^n credits}$ , where n is the number of modules (credits) in the discipline;

\*\*\*  $PK(middle) = \frac{\sum_1^n \times point}{\sum_1^n}$ , where n is the number of intermediate controls (2 controls per semester: in the middle and at the end of the semester) by discipline;

\*\*\*\*ИК – examination conducted at the end of the study of the discipline

;

\*\*\*\*\* $PD = \frac{TK_{ср} + PK_{ср} + PK_{ср} + ИК}{4}$ , the final rating of the results of all types of control at the end of the discipline;

$GPA = \frac{\sum_1^n \times балл}{\sum_1^n}$  where, n is the number of disciplines in the semester (for the past period of study).

A student who has not passed the current, boundary and intermediate controls to the final control (exam) is not allowed.

**The current control** is carried out during the period of classroom and independent work of the student on time according to the schedule, at the end of the study of the discipline, the average score of the current control (CC) is calculated. *Forms of current control can be:*

- testing (written or computerized);
- performance of individual homework assignments, abstracts and essays;
- student's work in practical (seminar) classes;
- various types of colloquia (oral, written, combined, express, etc.);
- control of performance and verification of reporting on laboratory work;
- visiting lectures and practical (seminar, laboratory) classes;
- Incentive rating (up to 10 points).

Other forms of current monitoring of results are also possible, which are determined by the teachers of the department and recorded in the work program of the discipline.

**The frontier control** is carried out in order to determine the results of the student's development of one credit (module) as a whole. *Frontier control* should be carried out only in writing, at the end of the study of the discipline, the average score of boundary control (BC) is calculated. As forms of *frontier control* of the training module, you can use:

- testing (including computer testing);
- interview with written fixation of students' answers;

- test.

Other forms of intermediate control of results are also possible.

**Intermediate control (mid-term exams)** is carried out in order to check the completeness of knowledge and skills in the material in the middle and end of the semester (2 times per semester) of studying the discipline, by the end of the study of the discipline, the average score of intermediate control (PCsr) is calculated, *forms of intermediate control (mid-term exams) can be:*

- testing (including computer testing);
- interview with written fixation of students' answers;
- test.

Other forms of intermediate control of results are also possible.

**The final control** is carried out during the session, by conducting an exam, it can be carried out in the following forms:

- testing (including computer testing);
- written exam (ticketing system).

### Correspondence of the point-rating system of assessments used by the institute and the assessments of the European system for the transfer of credit units, labor intensity (ECTS)

Grade						Criterion
System of letters	digital system	Traditional system	Points (%)	Scored points (max - 100)	Evaluation by discipline without an exam	
A	4	5	95-100	95-100	Credited/ passed	"Excellent" - deserves a student who has shown a deep, systematic and comprehensive knowledge of the educational material, who freely performs practical tasks, who has mastered the recommended basic and additional literature on the discipline
A-	3,67		90-94	90-94		"Excellent" - deserves a student who has shown a deep, systematic and comprehensive knowledge of the educational material, who freely performs practical tasks, who has mastered the recommended basic literature on the discipline, but is not familiar with additional literature
B+	3,33	4	85-89	70-89		"Good" - exhibited to a student who has shown a systematic and comprehensive knowledge of the educational material, able to independently replenish and update this knowledge in the course of training, performing practical tasks, familiar with the main literature on the discipline
B	3,0		80-84			"Good" is given to a student who has shown a systematic and comprehensive knowledge of the educational material, who is able to independently replenish this knowledge in the course of training, performing practical tasks, but not fully familiar with the main literature on the discipline
B-	2,67		75-79			"Good" - is given to a student who has shown the systematic nature of knowledge in the discipline, who is able to independently replenish this knowledge in the course of training, performing practical tasks, but not fully familiar with the main literature on the discipline
C+	2,33	3	70-74	50-69		"Satisfactory" - is given to a student who does not have a systematic nature of knowledge in the discipline, who is not capable of independently replenishing and updating knowledge in the course of further education, performing practical tasks with errors
C	2,0		65-69			"Satisfactory" - is given to a student who made mistakes in completing assignments, but who has the necessary knowledge to eliminate them under the guidance of a teacher
C-	1,67		60-64			"Satisfactory" - is set to a student who made errors in the performance of tasks, but who has the possible knowledge to eliminate them under the guidance of a teacher
D+	1,33		55-59			"Satisfactory" - is set to a student who made errors in the performance of tasks, who does not have the necessary knowledge to eliminate them
D-	1,0		50-54			Satisfactory" - is given to a student who has made significant errors in the performance of tasks, who does not have the necessary knowledge to eliminate them
FX	0,5	2	25-49	Less of 50	not credited/not passed	"Unsatisfactory" - is set to a student who has not completed the task, does not have the necessary knowledge to eliminate them
F	0		0-24			"Unsatisfactory" - is set to a student who has not completed the task, does not have the necessary knowledge to eliminate them, even under the guidance of a teacher

### **Academic achievement requirements:**

Attendance by students of all classroom classes without delay is mandatory.

In case of absence, classes are worked out in the order established by the dean's office.

If there are three passes, the teacher has the right not to allow the student to attend classes until the issue is administratively resolved.

If the absence of classes is more than 20.0% of the total number of classes, the student automatically enters the summer semester.

### **Note to the student:**

- ✓ regularly review lecture material;
- ✓ Do not be late and do not miss classes;
- ✓ work off missed classes if you have permission from the dean's office;
- ✓ Actively participate in the classroom (individually and in groups;)
- ✓ timely and fully complete homework assignments;
- ✓ submit all assignments within the time specified by the teacher;
- ✓ independently study the material in the library and at home;
- ✓ timely and accurately fulfill the tasks of the teacher, individual tasks for the IWS to achieve learning outcomes;
- ✓ to master the basic and additional literature necessary for the study of the discipline;
- ✓ performing tasks, the student should not copy or reproduce the work of other students, scientists, practitioners, plagiarism;
- ✓ develop their intellectual and oratory skills;

In case of non-compliance with the requirements of the Memo, the student will be penalized in the form of deducting points (one point for each violated item).

If the requirements of the Memo are fully met, the student is encouraged in the form of an additional 10 points to the final control in the discipline.

### **Academic Integrity, Conduct and Ethics Policy:**

- turn off your cell phone during class;
- Be polite;
- respect other people's opinions;
- formulate objections in the correct form;
- do not shout or raise your voice in the audience;
- independently complete all semester assignments;
- Eliminate plagiarism from your practice;

### **Methodical instructions.**

It is recommended to organize the time required to study the discipline as follows:

***When preparing for a practical lesson***, you must first read the abstract with the teacher's explanations.

***When performing exercises***, you must first understand what you want to do in the exercise, then proceed to its implementation.

***Literature work***. The theoretical material of the course becomes more understandable when books are studied in addition to the abstract. After studying the main topic, it is recommended to perform several exercises.

***Preparation for boundary and intermediate controls***. In preparation for the boundary and intermediate control, it is necessary to study the theory: the definitions of all concepts before understanding the material and independently do several exercises.

***Independent work of students*** is organized on all studied topics of each section. Independent work is carried out in the form of:

- work in Internet sites;
- work with basic and additional literature;
- fulfillment of written assignments;
- preparation of reports, abstracts, tables and posters on