



APPROVED
EMD decision

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Protocol No. 6

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



SYLLABUS by discipline

E.3.9.6. TROPICAL MEDICINE

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	9
Number of weeks	18
cREDITS	3
The total complexity of the discipline	90
Classroom/practical studies (PS)	46
Student Independent Work (SIW)	12
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
Job title	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

The purpose of studying the discipline. During the course, students' study tropicology, the history of science, stages of development. Types of climatic zones. Tropical pharmacology. Classification of tropical diseases. WHO programs on tropical and infectious diseases. Quarantine infections. Diagnosis of tropical infectious diseases. The issues of providing primary medical care in outpatient settings are considered; solutions of research and scientific-applied tasks in the field of healthcare for the diagnosis, treatment, medical rehabilitation and prevention of tropical infectious diseases. In the process of learning, students develop knowledge, skills and practical skills necessary for the early diagnosis of tropical diseases; great importance is attached to teaching early recognition of tropical diseases during examination of the patient,

differential diagnosis with other infectious and non-infectious diseases occurring with similar symptoms, the choice of optimal methods of laboratory and instrumental examination, timely recognition of urgent conditions. The main issues of pathogenesis of infectious diseases are considered and studied; the main clinical manifestations (symptoms, syndromes) of the studied infectious diseases in the tropics and subtropics; the main methods of modern laboratory and instrumental diagnostics used in infectiology (indications for use, interpretation of results), rules for taking pathological materials from the patient; basic principles of treatment of infectious diseases; indications for hospitalization of the patient. Assessment of hematological changes characteristic of various infectious diseases of tropical and subtropical regions. By the end of the course, students demonstrate the action of a doctor in identifying a patient with a suspected disease that is subject to International Health Regulations (yellow fever, Ebola hemorrhagic fever, plague). Be able to notice changes in the nature of the course of many infectious diseases, the emergence of new pharmacological agents and diagnostic methods, as well as modern methods of prevention of infectious and tropical diseases.

Prerequisites of the discipline:

- Outpatient surgery
- Family medicine
- Public health and healthcare
- Epidemiology
- Clinical pharmacology
- Psychiatry and narcology
- Phthisiology

Postrequisites of the discipline:

- Management in healthcare
- Assistant to the CSM doctor

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

No.No	Names of the topics
1.	Arbovirus infections, arbovirus encephalitis, systemic arbovirus diseases
2.	Arbovirus infections: hemorrhagic fevers — tick-borne, mosquito-borne, contagious, zoonotic
3.	Borreliosis: recurrent typhus, tick-borne recurrent typhus, systemic recurrent borreliosis (Lyme disease).
	Non-venereal treponematoses: pint, yaws, bedzhel
4.	Malaria. Toxoplasmosis
5.	Cutaneous and visceral leishmaniasis (Old and New World)
6.	Trypanosomiasis (African and American).
	Amoebiasis, primary amoebic meningoencephalitis
7.	Trematodoses – schistosomiasis (intestinal, genitourinary, Japanese).
	Opisthorchiasis. Clonorchiasis. Fascioles
8.	Filariasis: vuchereriosis, brugiosis, loaosis, onchocerciasis, dracunculosis, hookworm
9.	Imported helminthiasis Hookworm, filariasis (vuchereriosis, brugiosis Malay, brugiosis Timor, loaosis, onchocerciasis, mansonellosis), schistosomiasis.
10.	Malaria. The evolution of the oldest disease: the area of malaria in the period of its formation (primary nosoareal, the formation of nosoareal, the limits of the initial nosoareal, temperature limits of parasite development, economic activity of the population and migration), the area of malaria in its heyday (the structure of nosoareal by endemic level, the period of spontaneous

	regression, regression of nosoareal in the period of organized struggle, nosoareal malaria in the post-liquidation period)
11.	Typical life cycle of malarial plasmodia in humans. Variants, geographical races and strains of malarial plasmodium (three-day malaria). Features of tropical malaria strains. Features of the spread of ovale malaria and four-day malaria
12.	Pathogenesis and phases of malaria infection. Pathogenesis: pathogenic effect of the parasite on the human host organism, systemic lesions, organ pathology. Phases of malaria infection. Clinical picture: general features of the course of malaria infection, the course of uncomplicated tropical malaria, severe and complicated tropical malaria in adults, pregnant women and children, three-day malaria, ovale malaria, four-day malaria, mixed malaria
13.	Malaria clinic in partially immune individuals. Malaria in children. Malaria in pregnant women. Vaccinated (schizontal) malaria. Congenital malaria. Asymptomatic parasitosis. Malaria and HIV infection. Malaria in combination with other parasitoses. Treatment and chemoprophylaxis. Antimalarial drugs. The concept of combined treatment with antimalarial drugs. Drug resistance of malaria parasites. Treatment of malaria patients. Chemoprophylaxis
14.	The malariological situation in the countries and the WHO recommended regimens of chemoprophylaxis of malaria. Immunity in malaria. Innate immunity. Acquired immunity. The mechanism of acquired immunity. Antisporozoite immunity. Anti-erythrocyte immunity. Antigametocyte immunity. Immunity to asexual forms of the malaria parasite
15.	The role of CD4+ and CD8+ cells in tropical malaria. Cytokines in malaria. Immunopathology. Prospects of immunoprophylaxis
16.	Laboratory diagnostics of malaria. Tactics of clinical examination of a febrile patient, laboratory diagnostics. Identification of malarial plasmodia. Shaped elements of blood and parasites in a thick drop and a thin smear of blood. Determination of the level of parasitemia. Fluorescence microscopy of blood centrifugate
17.	Modern methods and methods of treatment of human parasitic diseases. Anthelmintic and antiprotozoal drugs. Classification. Ways and methods of introduction. Indications and contraindications.

List of main and additional literature:

Main literature:

1. Infectious diseases: National Guidelines, edited by N.D. Yushchuk, Yu.Ya. Vengerov Moscow: GEOTAR Media, 2019
2. Nagoya B. S. Medical Microbiology and Parasitology/ B. S. Nagoba, A. Picture. - 3-nd edition. -: Elsevier, 2016.

Additional literature:

1. Lectures on infectious diseases N.D. Yushchuk, Yu.Ya. Vengerov - 4th ed., reprint. and add. T2 Moscow: GEOTAR Media, 2016
2. Tropical diseases and medicine of travelers' diseases A.M. Bronstein Moscow: GEOTAR Media, 2014
3. Medical parasitology: studies. manual / A. B. Vinogradov; ed. by L. P. Sidorov. - Perm: Perm. state. med. akad., 2016

Internet resources:

www.rosmedlib.ru
www.medobr.ru
<http://www.studmedlib.ru/book/ISBN9785970437612.html>
www.medobr.ru
<http://www.edu.ru>
<http://www.medicina.ru>
<http://www.infectology.ru>

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;

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

*** $ПК(middle) = \frac{\sum_1^n \times point}{\sum_1^n}$, 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

;

***** $РД = \frac{TK_{ср} + PK_{ср} + ПК_{ср} + ИК}{4}$, 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		70-74			"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	3	65-69	50-69		"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