

**SYLLABUS  
PHTISIATRY**

<b>1. General information about the discipline</b>			
1.1	Faculty/School: Medicine and Healthcare General Practice department	1.6	Credits (ECTS): 4 120 hours, out of which 80 contact hours (practical training)
1.2	Educational program (EP):  6B10103 ЖАЛПЫ МЕДИЦИНА 6B10103 ОБЩАЯ МЕДИЦИНА 6B10103 GENERAL MEDICINE	1.7	<b>Prerequisites:</b> Internal diseases, Fundamentals of Pediatrics <b>Postrequisites:</b> Residency <i>Edited by</i> Timothy D. McHugh
1.3	Agency and year of accreditation of the EP  IAAR 2021	1.8	SIW/SPM/SRD (qty): 20 hours
1.4	Name of discipline: <b>Phthisiatry</b>	1.9	SRSP/SRMP/SRDP (number): 20 hours
1.5	Discipline ID: <b>Fti5307</b> Discipline code:	1.10	<b>Required - yes</b>
<b>2. Description of the discipline</b>			
<b>3 Purpose of the discipline</b>			
mastering the diagnosis and treatment of patients with the most common clinical forms of tuberculosis, including those with multiple and broad drug resistance, based on the principles of evidence-based medicine, using the skills of effective professional communication, interpretation of clinical symptoms and syndromes, data from laboratory and instrumental research methods and the application of basic medical diagnostic and preventive measures			
<b>4. Learning outcomes (LO) by discipline (3-5)</b>			
	LO disciplines		LO according to the educational program, with which the LO is associated by discipline (LO No. from the EP passport)

2		Proficiency level	1. Collect information from patients and other sources related to the diagnosis, treatment and prevention of common and emergency conditions, including the performance of diagnostic procedures.
3	– to identify and interpret clinical symptoms and syndromes, data of laboratory and instrumental methods of research of patients with various forms of pulmonary and extrapulmonary tuberculosis in their typical manifestation and course and in the age aspect;	Proficiency level 4	2. Identify and interpret the clinical symptoms and syndromes, the data of laboratory and instrumental methods of research of patients with the most common diseases in their typical manifestation and course in the age aspect; interpret, analyze, evaluate, and prioritize relevant data for developing a plan for diagnosing and managing a disease, including initiating appropriate interventions.
4	– apply knowledge of the principles of providing medical care to infectious patients, the principles and methods of preventing infectious diseases according to regulations on infectious diseases (orders of the Ministry of Healthcare and Social Development, Ordinances, clinical protocols);	Proficiency level 4	3. Integrate clinical skills and knowledge to provide individualized approach in the treatment of a specific patient, and the strengthening of health in accordance with its needs; make professional decisions based on the analysis of the rationality of diagnosis and applying the principles of evidence-based and personalized medicine.
5	– demonstrate communication skills when working with children and their parents (legal representatives), teamwork skills, organization and management of the diagnostic and therapeutic process;	Proficiency level 4	4. Apply knowledge of the basic principles of human behavior for effective communication and therapeutic and diagnostic process in compliance with the principles of ethics and deontology; apply knowledge of the psychology of the patient, taking into account cultural characteristics and race; demonstrate skills in teamwork, organization and management of the diagnostic and therapeutic process; effectively build dynamic relationships between doctor and patient, which occur before, during and after medical treatment; effectively communicate medical information verbally and in writing to provide safe and effective care for patients; work effectively in an interprofessional / multidisciplinary team with other health care professionals;
6		Proficiency	5. To provide medical care for the most common diseases in patients of all age groups, in urgent and life-threatening conditions;

		ency level 4	
	– know the structure and mode of the infectious diseases hospital, the rules for hospitalization of infectious patients, the structure of the infectious service;	Proficiency level 4	6. To apply knowledge of the rights, duties and ways of protecting the rights of the physician and the patient, including the child as a patient, in their professional activities; apply medical knowledge, clinical skills and professional attitude to the patient regardless of his age, culture, faith, traditions, nationality, lifestyle.
		Proficiency level 4	8. Analyze and maintain the necessary documentation and organization of documents in health care organizations; the use of modern information and digital technology, and health information systems for professional applications
	–	Proficiency level 4	9. Apply knowledge of the principles and methods of formation a healthy human and family life, population health; apply knowledge of a set factors that determine health and disease for the purpose of prevention
7	– demonstrate commitment to professional values, such as altruism, compassion, empathy, responsibility, honesty and respect for the principles of confidentiality;	Proficiency level 4	10. Demonstrate commitment to the highest standards of professional responsibility and honesty; observe ethical principles in all professional interactions with patients, families, colleagues and society as a whole, regardless of ethnic characteristics, culture, gender, economic status or sexual orientation;
8	demonstrate abilities and needs for continuous professional training and improvement of their knowledge and skills of professional activity.	Proficiency level 4	11. Demonstrate the need for continuing professional education and the improvement of their knowledge and skills throughout their professional activities

9		Proficiency level 4	12. Demonstrate skills in scientific research, the pursuit of new knowledge and transfer knowledge to others
<b>5.</b>	<b>Summative assessment methods</b> (mark (yes – no) / specify your own):		
5.1	MCQ testing for understanding and application	5.5	Scientific project SSRW (student's scientific research work)
5.2	Practical skills – Miniclinical exam (MiniCex)	5.6	360 score - behavior and professionalism
5.3	3. SIW- <b>creative task</b>	5.7	Midterm control: Stage 1 - MCQ testing for understanding and application Stage 2 – passing practical skills (miniclinical exam (MiniCex))
5.4	Medical history	5.8	Exam: Stage 1 - Testing on MCQ for understanding and application Stage 2 - OSCE with Standard Patient

<b>6.</b>	<b>Detailed information about the discipline</b>			
6.1	Academic year: 2024-2025	6.3	Timetable (сабақ күні, уақыт): From 8.00 to 14.00	
6.2	Semester: 8 semester	6.4	Place (educational building, office, platform and link to the DOT learning meeting): «NATIONAL SCIENTIFIC CENTER OF PHTHISIOPULMONOLOGY» <b>MINISTRY OF HEALTH OF THE REPUBLIC OF KAZAKHSTAN,</b> City Clinical Hospital №1, City Clinical Hospital №7	
<b>7.</b>	<b>Discipline leader</b>			
Senior lecturer	Maulenova Madina Bolatkyzy	General Practice department «NATIONAL SCIENTIFIC CENTER OF PHTHISIOPUL MONOLOGY» <b>MINISTRY OF HEALTH OF THE REPUBLIC OF KAZAKHSTA N</b>	Madi.mm@list.ru +77766327264	
<b>8.</b>	<b>The content of the discipline</b>			
	Name of the discipline		Quantity of hours	Conducting form
1.	Epidemiology of tuberculosis and its features in the world and Kazakhstan. Infection control is an important component of the "End TB" strategy. The causative agent of tuberculosis and its properties. Sources and ways of transmission of infection. Tuberculosis with multiple and broad drug resistance (MDR/XDR-TB).		8	TBL Work with patients, out of which 50% is patient management
2.	Methods of detection and diagnosis of tuberculosis in children, adolescents and adults. Tuberculosis infection (LTBI).		8	TBL Work with patients, out of which 50% is patient management

3.	Tuberculosis prevention is specific (BCG vaccination and revaccination). Adverse reactions of the BCG vaccine. Non-specific prevention of tuberculosis.	8	CBL Work with patients, out of which 50% is patient management
4.	Classification of tuberculosis, classification of cases of the disease. Primary forms of tuberculosis. Primary tuberculosis complex (clinic, diagnosis, treatment, outcomes). Tuberculosis of the intrathoracic lymph nodes (clinic, diagnosis, treatment, outcomes).	8	CBL Work with patients, out of which 50% is patient management
5.	Disseminated pulmonary tuberculosis (acute, subacute, chronic). Principles of treatment of tuberculosis patients, including MDR/XDR-TB. Classification of anti-tuberculosis drugs.	8	CBL Work with patients, out of which 50% is patient management
6.	Tuberculosis meningitis/ meningoencephalitis - clinic, diagnosis, treatment	8	CBL Work with patients, out of which 50% is patient management
7.	Secondary forms of tuberculosis. Focal, infiltrative pulmonary tuberculosis, caseous pneumonia, tuberculoma, cavernous, fibrous-cavernous - clinic, diagnosis, treatment.	8	CBL Work with patients, out of which 50% is patient management
8.	Extrapulmonary forms of tuberculosis. Tuberculous pleurisy, tuberculosis of bones and joints, tuberculosis of peripheral and mesenteric lymph nodes (clinic, diagnosis, treatment). Exam.	8	CBL Work with patients, out of which 50% is patient management
9.	Tuberculosis of the lungs in combination with other diseases (HIV infection and AIDS, diabetes mellitus, COPD, drug addiction, alcoholism). Tuberculosis in pregnant women and in the postpartum period.	8	CBL Work with patients, out of which 50% is patient management
10.	Basic principles and methods of treatment of tuberculosis patients, including those with MDR/XDR-TB in accordance with international standards and clinical protocols. Criteria for the cure of tuberculosis. Emergency conditions in tuberculosis of the respiratory system.	8	CBL Work with patients, out of which 50% is patient management
11.	<b><i>Boundary control (tests, OSE)</i></b>	2	

<b>Midterm control 1</b>	Summative evaluation: 2 stages: 1-stage – MCQ testing for understanding and application - 50% 2-stage – mini clinical exam (MiniCex) - 50%	
<b>Midterm control 2</b>	Summative evaluation: 2 stages: 1-stage – MCQ testing for understanding and application - 50% 2-stage – mini clinical exam (MiniCex) - 50%	
<b>Final control (Exam)</b>	Summative evaluation: 2 stages: 1-stage – MCQ testing for understanding and application - 50% 2- stage – OSCE with NP - 50%	
<b>Total</b>		<b>100</b>
<b>9.</b>	<b>Methods of teaching in the discipline</b> (briefly describe the approaches to teaching and learning that will be used in teaching) Using active learning methods: TBL, CBL	
1	<b>Methods of formative assessment:</b> TBL – Team Based Learning CBL – Case Based Learning	
2	<b>Summative assessment methods (from point 5):</b> 1. MCQ testing for understanding and application 2. Passing practical skills - miniclinal exam (MiniCex) 3. SIW - <b>creative task</b> 4. Medical history 5. Scientific project SSRW (student’s scientific research work) 6. 360 score - behavior and professionalism	
<b>10.</b>	<b>Summative assessment</b>	
<b>№</b>	<b>Forms of control</b>	<b>General % from total %</b>
1	Patient history defence	30% (estimated by the checklist)
5	Border control	70% (1-stage – MCQ testing for understanding and application - 50%; 2- stage – mini clinical exam (MiniCex) - 50%)
<b>Border control 1</b>		30% +70% = 100%
1	Patient history defence	20% (estimated by the checklist)

2	360 score - behavior and professionalism	10% (estimated by the checklist)	
3	Scientific project SSRW (student's scientific research work)	10%	
5	Border control	60% (1-stage – MCQ testing for understanding and application - 50%; 2- stage – mini clinical exam (MiniCex) - 50%)	
<b>Border control 2</b>		20+10+10 + 60 = 100%	
9	Exam	<b>2 stages:</b> 1st stage - testing on MCQ for understanding and application - 50% 2nd stage - OSCE with NP - 50%	
10	<b>Final score:</b>	ORD 60% + Exam 40%	
<b>10.</b>	<b>Score</b>		
<b>Rating by letter system</b>	<b>Digital equivalent</b>	<b>Points (% content)</b>	<b>Assessment Description</b> (changes should be made only at the level of the decision of the Academic Committee on the quality of the faculty)
A	4,0	95-100	<b>Excellent. Exceeds the highest job standards.</b>
A-	3,67	90-94	<b>Excellent.</b> Meets the highest job standards.
B+	3,33	85-89	<b>Good.</b> Very good. Meets high job standards.
B	3,0	80-84	<b>Good.</b> Meets most of the job standards.
B-	2,67	75-79	<b>Good.</b> More than enough. Shows some reasonable ownership of the material.
C+	2,33	70-74	<b>Good.</b> Acceptable. Meets the basic standards of the task.
C	2,0	65-69	<b>Satisfactory.</b> Acceptable. Meets some basic job standards.
C-	1,67	60-64	<b>Satisfactory.</b> Acceptable. Meets some basic job standards.
D+	1,33	55-59	<b>Satisfactory.</b> Minimally acceptable.
D	1,0	50-54	<b>Satisfactory.</b> Minimally acceptable. The lowest level of knowledge and completion of the task.
FX	0,5	25-49	<b>Unsatisfactory.</b> Minimally acceptable.



F	0	0-24	<b>Unsatisfactory.</b> Very low productivity.	
<b>11.</b>	<b>Educational resources</b> (use the full link and specify where you can access the texts/materials)			
Literature	<b>Main Available in the library</b>			
	<b>Author</b>	<b>Name of the book, publisher</b>	<b>Year of publication</b>	
	<ol style="list-style-type: none"> <li>1. Tuberculosis: Laboratory Diagnosis and Treatment Strategies Timothy D. McHugh, 2012</li> <li>2. Rakisheva A. S., Tsogt G. "Phthisiology" textbook for students of medical universities, Almaty, 2014, pp. 270-283.</li> <li>3. Perelman M. I. Phthisiology. translated into Kazakh by T. A. Muminov Almaty, 20123. Perelman M. I., Phthisiology [Electronic resource]: textbook / M. I. Perelman, I. V. Bogadelnikova. - 4th ed., reprint. and additional-M.: GEOTAR-Media, 2015. - 448 p. - ISBN 978-5-9704-3318-8, Access mode: <a href="http://www.studmedlib.ru/book/ISBN9785970433188.html">http://www.studmedlib.ru/book/ISBN9785970433188.html</a></li> <li>4. Order of the Minister of Health of the Republic of Kazakhstan dated November 30, 2020 No. KR DSM-214/2020</li> <li>5. World Health Organization (WHO). Section Tuberculosis <a href="http://www.who.int/tb/ru/">www.who.int/tb/ru/</a></li> <li>6. Electronic library system "Student consultant" under the contract, [Electronic resource] / LLC "IPUZ", Moscow. - Access mode: <a href="http://www.studmedlib.ru">http://www.studmedlib.ru</a></li> <li>7. Electronic sources</li> <li>8. Electronic resources: - Moodle, electronic databases - electronic textbooks - educational videos - educational animation-presentations</li> </ol> <ol style="list-style-type: none"> <li>1. Phthisiatry / Koshechkin V. A. - Москва : ГЭОТАР-Медиа, 2017.</li> <li>2. Clinical Tuberculosis Edited By Lloyd N. Friedman, Martin Dedicoat, Peter D. O. Davies, 2021</li> </ol>			
<b>Available at the department</b>				



Simulators in the simulation center	
Special software	<ol style="list-style-type: none"> <li>1. Google classroom - <a href="https://classroom.google.com/c/NjM5MTM2NDA1MDUw?cjc=xahngop">https://classroom.google.com/c/NjM5MTM2NDA1MDUw?cjc=xahngop</a></li> <li>2. Medical calculators: Medscape, Physician's Handbook, MD+Calc - freely available.</li> <li>3. Directory of diagnostic and treatment protocols for medical workers from the RCHD, the Ministry of Health of the Republic of Kazakhstan: Dariger - available in the public domain.</li> </ol>
<b>12.</b>	<b>Tutor Requirements and Bonus System</b>
	<p><b>A student in accordance with an individual internship plan:</b></p> <ol style="list-style-type: none"> <li>1) supervises patients in organizations providing pre-medical medical care, emergency medical care, specialized medical care (including high-tech), primary health care, palliative care and medical rehabilitation;</li> <li>2) participates in the appointment and implementation of diagnostic, therapeutic and preventive measures;</li> <li>3) conducts documentation and sanitary and educational work among the population;</li> <li>4) participates in preventive examinations, medical examinations, is present at consultations;</li> <li>5) participates in clinical rounds, clinical reviews;</li> <li>6) participates in duty at least four times a month in medical organizations (duty is not taken into account when calculating the workload of an internship student);</li> <li>7) participates in clinical and clinical-anatomical conferences;</li> <li>8) is present at pathoanatomical autopsies, participates in the research of autopsy, biopsy and surgical materials;</li> <li>9) under the supervision of a scientific supervisor, collects material and analyzes data for a scientific project.</li> </ol> <p><b>Bonus system:</b> For extraordinary achievements in the field of future professional activity (clinical, scientific, organizational, etc.), additional points up to 10% of the final assessment can be added to the student (by the decision of the department)</p>
<b>13.</b>	<b>Discipline policy (части, выделенные зеленым, пожалуйста, не изменяйте)</b>
	<p>Discipline policy is determined by the University's Academic Policy and the University's Academic Integrity Policy. If the links do not open, then you can find the relevant documents in IS Univer.</p> <p><b>Rules of Professional Conduct:</b></p> <ol style="list-style-type: none"> <li>1) <b>Appearance:</b> <ul style="list-style-type: none"> <li>✓ office style of clothing (shorts, short skirts, open T-shirts are not allowed to attend university, jeans are not allowed in the clinic)</li> <li>✓ Clean and ironed coat</li> <li>✓ medical mask</li> <li>✓ medical cap (or a neat hijab without hanging ends)</li> </ul> </li> </ol>

- ✓ medical gloves
- ✓ changeable shoes
- ✓ neat hairstyle, long hair should be gathered in a ponytail, or a bun, for both girls and guys. Neatly short cut nails. Bright, dark manicure is prohibited. It is permissible to cover the nails with transparent varnish.
- ✓ badge with full name (full name)

2) Mandatory presence of a phonendoscope, tonometer, centimeter tape, (you can also have a pulse oximeter)

3) Properly executed sanitary (medical) book (before the start of classes and must be updated on time)

4) \* **Possession of a vaccination passport or other document confirming a fully completed course of vaccination against COVID-19 and influenza**

5) **Mandatory observance of the rules of personal hygiene and safety**

6) **Systematic preparation for the educational process.**

7) **Accurate and timely maintenance of reporting documentation.**

8) Active participation in medical-diagnostic and public events of the departments.

**A student without a medical book and vaccination will not be allowed to see patients.**



**A student who does not meet the requirements for appearance and / or from whom a strong / pungent odor emanates, since such a smell can provoke an undesirable reaction in the patient (obstruction, etc.) - is not allowed to the patients!**

**Преподаватель в праве принять решение о допуске к занятиям студентов, которые не выполняют требования профессионального поведения, включая требования клинической базы!**

#### **Study discipline:**

1. Being late for classes or the morning conference is not allowed. In case of being late, the decision on admission to the lesson is made by the teacher leading the lesson. If there is a good reason, inform the teacher about the delay and the reason by message or by phone. After the third delay, the student writes an explanatory note addressed to the head of the department indicating the reasons for being late and is sent to the dean's office to obtain admission to the lesson. If you are late without a valid reason, the teacher has the right to deduct points from the current grade (1 point for each minute of delay)
2. Religious events, holidays, etc. are not a valid reason for skipping, being late and distracting the teacher and the group from work during classes.
3. If you are late for a good reason - do not distract the group and the teacher from the lesson and quietly go to your place.
4. Leaving the class ahead of time, being outside the workplace during school hours is regarded as absenteeism.
5. Additional work of students during study hours (during practical classes and shifts) is not allowed.
6. For students who have more than 3 passes without notifying the curator and a good reason, a report is issued with a

	<p>recommendation for expulsion.</p> <ol style="list-style-type: none"> <li>7. Missed classes are not made up.</li> <li>8. The internal regulations of the clinical bases of the department are fully applicable to students</li> <li>9. Greet the teacher and any senior by standing up (in class)</li> <li>10. Smoking (including the use of vapes, electronic cigarettes) is strictly prohibited on the territory of medical facilities (outdoors) and the university. Punishment - up to the annulment of boundary control, in case of repeated violation - the decision on admission to classes is made by the head of the department</li> <li>11. Respectful attitude towards colleagues regardless of gender, age, nationality, religion, sexual orientation.</li> <li>12. Have a laptop / laptop / tab / tablet with you for studying and passing MCQ tests for TBL, boundary and final controls.</li> <li>13. Taking MCQ tests on phones and smartphones is strictly prohibited..</li> </ol> <p>The behavior of the student at the exams is regulated by the "Rules for the final control", "Instructions for the final control of the autumn/spring semester of the current academic year" (the current documents are uploaded to the Univer IS and are updated before the start of the session); "Regulations on checking text documents of students for the presence of borrowings."</p>
14	<ol style="list-style-type: none"> <li><b>1. Constantly preparing for classes:</b> For example, backs up statements with relevant references, makes brief summaries Demonstrates effective teaching skills, assists in teaching others</li> <li><b>2. Take responsibility for your learning:</b> For example, manages their learning plan, actively tries to improve, critically evaluates information resources</li> <li><b>3. Actively participate in group learning:</b> For example, actively participates in discussions, willingly takes tasks</li> <li><b>4. Demonstrate effective group skills</b> For example, takes the initiative, shows respect and correctness towards others, helps to resolve misunderstandings and conflicts.</li> <li><b>5. Skillful communication skills with peers:</b> For example, he listens actively, is receptive to nonverbal and emotional signals Respectful attitude</li> <li><b>6. Highly developed professional skills:</b> Eager to complete tasks, seek opportunities for more learning, confident and skilled Compliance with ethics and deontology in relation to patients and medical staff Observance of subordination.</li> <li><b>7. High introspection:</b> For example, recognizes the limitations of his knowledge or abilities, without becoming defensive or reproaching others</li> <li><b>8. Highly developed critical thinking:</b></li> </ol>

	<p>For example, accordingly demonstrates skills in performing key tasks, such as generating hypotheses, applying knowledge to cases from practice, critically evaluating information, making conclusions aloud, explaining the process of reflection</p> <p><b>9. Fully complies with the rules of academic behavior with understanding, offers improvements in order to increase efficiency.</b></p> <p>Observes the ethics of communication – both oral and written (in chats and appeals)</p> <p><b>10. Fully follows the rules with full understanding of them, encourages other members of the group to adhere to the rules</b></p> <p>Strictly adheres to the principles of medical ethics and PRIMUM NON NOCER</p>	
<b>15.</b>	<p><b>Distance/Online Learning – Prohibited in Clinical Discipline</b> (части, выделенные зеленым, пожалуйста, не изменяйте)</p>	
	<p>1. According to the order of the Ministry of Education and Science of the Republic of Kazakhstan No. 17513 dated October 9, 2018 "On approval of the List of areas of training with higher and postgraduate education, training in which in the form of external studies and online education is not allowed". According to the above regulatory document, specialties with the discipline code of health care: bachelor's degree (6B101), master's degree (7M101), residency (7R101), doctoral studies, (8D101) - training in the form of external study and online education - is not allowed.</p> <p>Thus, students are prohibited from distance learning in any form. It is only allowed to work out a lesson in a discipline due to the absence of a student for reasons beyond his control and the presence of a timely confirming document (example: a health problem and presenting a confirming document - a medical certificate, a signal sheet of the PHC, an extract from a consultative appointment with a medical specialist - a doctor)</p>	
<b>16.</b>	<p><b>Approval and review</b></p>	
Department head		Kurmanova G.M.
Teaching Quality Committee and teaching faculty		Kurmanova G.M.

**THEMATIC PLAN AND CONTENT OF PRACTICAL CLASSES**

№	Topic	Content	Teaching methods
1	Epidemiology of tuberculosis and its features in the world and Kazakhstan. Infection control is an important component of the "End TB" strategy. The causative agent of tuberculosis and its properties. Sources and ways of transmission of infection. Tuberculosis with multiple and broad drug resistance (MDR/XDR-TB).	Tuberculosis remains one of the deadliest infections in the world (WHO, 2022) and is currently the second cause of death from infectious diseases after COVID-19. In 2020, for the first time in more than ten years, there was an increase in the number of deaths from tuberculosis. Multidrug-resistant tuberculosis (MDR-TB) continues to be a crisis situation and a threat to health security. The problem of tuberculosis with MDR/XDR-TB causes serious concerns around the world and in Kazakhstan. Kazakhstan is one of the 30 countries in the world with a high level of MDR-TB. Infection control is a set of measures to prevent the transmission of Mycobacterium tuberculosis (MBT) in medical institutions and reduce the risk of spreading TB infection. The causative agent of tuberculosis is Mycobacterium tuberculosis, which is characterized by very high resistance to environmental factors. The main route of transmission of tuberculosis is aerogenic.	TBL
2	Methods of detection and diagnosis of tuberculosis in children, adolescents and adults Tuberculosis infection (LTBI).	Methods for detecting TB in children, adolescents and adults: sputum examination in the presence of cough for more than 2 weeks by the molecular genetic method G-Xpert, FG - from 15 years, in children also the Mantoux test 2 TE and ATP (Diaskintest). For the diagnosis of TB - Hain-test and VASTES. Latent tuberculosis infection (LT) is a state of persistent immune response to Mycobacterium tuberculosis antigens that have previously entered the body in the absence of clinical manifestations of active tuberculosis. Diagnostic methods of LTI: Mantoux test, ATP, IGRA tests (T-SPOT.TB, QuantiFERON® -TV Gold).	TBL
3	Tuberculosis prevention is specific (BCG vaccination and revaccination). Undesirable reactions of the BCG vaccine. Nonspecific prevention of tuberculosis.	Prevention of TB in children includes: timely detection and appropriate treatment of TB patients; specific immunization (BCG vaccination); specific chemoprophylaxis. The Calmette-Guerin bacillus is a BCG vaccine, first used in 1921, but is still the only vaccine used to protect against TB. The effect of BCG vaccination is manifested in protection against severe hematogenic forms of TB, including tuberculous meningitis and miliary tuberculosis in young children. Vaccination in the Republic of Kazakhstan is carried out on 1-4 days of life, in childbirth.at home, revaccination – at 6 years old (1st grade). Indications and contraindications to BCG vaccination and revaccination. Undesirable effects on the introduction of BCG (lymphadenitis, subcutaneous cold abscess, ulcer, ostitis, keloid scar) – diagnosis, management	

		tactics. Preventive treatment – indications, therapy regimens according to WHO and CP recommendations.	
4	Classification of tuberculosis, classification of cases of the disease. Primary forms of tuberculosis. Primary tuberculosis complex. Tuberculosis of the intra-thoracic lymph nodes. Clinic, diagnosis, treatment, outcomes.	Primary tuberculosis. Features of the primary period of tuberculosis infection. Clinical manifestations of paraspecific reactions. Diagnostic algorithm for suspected primary tuberculosis. Primary tuberculosis complex. Clinical and radiological stages and variants of the clinical course. Diagnosis and treatment, outcomes, observation of the dispensary. Tuberculosis of the intra-thoracic lymph nodes. Forms of the disease, diagnosis, treatment, outcome and differential diagnosis. Primary tuberculosis in adults. Features of clinical manifestations, diagnosis, treatment, outcome, observation of the dispensary. Differential diagnosis of primary tuberculosis.	CBL CBL
5	Disseminated pulmonary tuberculosis (acute, subacute, chronic). Clinic, diagnosis, treatment	Disseminated tuberculosis. Features of disseminated tuberculosis in early and late dissemination. Clinical forms of disseminated tuberculosis: acute, subacute, chronic, generalized. Clinical variants of acute disseminated tuberculosis, diagnosis. Treatment and outcomes, observation of the dispensary. Differential diagnosis of disseminated tuberculosis.	CBL
6	Tuberculous meningitis /meningoencephalitis - clinic, diagnosis, treatment.	Tuberculous meningitis. Classification. Clinical manifestations. Pathomorphosis of tuberculous meningitis. Diagnostics, differential diagnostics. Treatment. Prevention. Dispensary observation. Liquor program	CBL
7	Secondary forms of tuberculosis. Focal, infiltrative pulmonary tuberculosis, caseous pneumonia, tuberculoma, cavernous, fibrous-cavernous - clinic, diagnosis, treatment.	Focal tuberculosis is a limited process, the main method of detection is FG. Clinical and radiological manifestations of infiltrative pulmonary tuberculosis, features of their diagnosis, differential diagnosis and treatment. Caseous pneumonia, pathogenesis. Clinic, diagnostics, differential diagnosis, observation of the dispensary. Tuberculosis, types of tuberculosis, clinical and radiological features of the course. Diagnosis and treatment. Destructive forms of tuberculosis, their significance in the epidemiology of tuberculosis.	CBL
8	Extrapulmonary forms of tuberculosis. Tuberculous pleurisy, tuberculosis of bones and joints, tuberculosis of peripheral and mesenteric lymph nodes (clinic, diagnosis, treatment).	Tuberculous pleurisy. Clinical and radiological picture. Videothoroscopic method in diagnosis and treatment. Diagnosis, differential diagnosis of pleurisy of tuberculous etiology, treatment. Tuberculosis of bones and joints (spondylitis, coxitis, gonitis, etc.) – diagnosis and treatment. Tuberculosis of peripheral and mesenteric lymph nodes, features of the course and diagnosis. The importance of instrumental (biopsy, laparoscopy) and molecular genetic methods in the diagnosis of extrapulmonary forms of TB.	CBL
9	Tuberculosis of the lungs in combination with other diseases (HIV infection and	Tuberculosis of the lungs and HIV infection. About 10% of patients with HIV infection suffer from tuberculosis. In this regard, this combination acquires acute medical and social significance.	CBL



	<p>AIDS, diabetes mellitus, COPD, drug addiction, alcoholism). Tuberculosis in pregnant women and in the postpartum period.</p>	<p>Tuberculosis of the lungs and diabetes mellitus. Diabetes mellitus causes tuberculosis 2-4 times more often than healthy people. Clinical and radiological signs of tuberculosis in patients with diabetes mellitus. Early detection of tuberculosis, treatment and prevention in diabetic patients.</p> <p>Pulmonary tuberculosis and COPD. Patients with chronic nonspecific respiratory diseases are a risk group for tuberculosis and vice versa, patients with residual post-tuberculosis changes suffer from chronic diseases of the bronchopulmonary system. Early detection, treatment and prevention of tuberculosis.</p> <p>Pulmonary tuberculosis and peptic ulcer disease. Patients with gastric ulcer and duodenal ulcer are persons with an increased risk of tuberculosis. Both diseases mutually burden the course of diseases. Features of the clinic and treatment, prevention.</p> <p>Tuberculosis of the lungs and alcoholism. The course of tuberculosis in patients with alcoholism. Features of inpatient and outpatient treatment. Tuberculosis and drug addiction, tuberculosis and tobacco smoking.</p> <p>Tuberculosis of the lungs in pregnant women and in the postpartum period. Diagnosis, clinic, features of the course of tuberculosis in pregnant women and in the postpartum period, treatment, dispensary observation.</p>	
10	<p>Basic principles and methods of treatment of tuberculosis patients, including those with MDR/XDR-TB in accordance with international standards and clinical protocols. Criteria for the cure of tuberculosis. Emergency conditions in tuberculosis of the respiratory system</p>	<p>International standards of treatment. Treatment of patients depending on the sensitivity of the pathogen, treatment regimens. The value of controlled chemotherapy. Principles of chemotherapy. Pharmacovigilance and monitoring of adverse events in the treatment of tuberculosis patients. MDR, XDR-TB, features of treatment of patients with drug-resistant forms of MBT. Indications for the use of surgical methods of treatment. The concept of a clinical cure for tuberculosis, criteria. Emergency care for pulmonary hemorrhage and spontaneous pneumothorax.</p>	CBL

**RUBRICATOR FOR ASSESSING LEARNING OUTCOMES  
with summative assessment**

**Rating calculation formula**

**For the 4th course as a whole- overall admission rating (OAR)**

Medical history	30%
Border control 1	70%
<b>Total for BC-1</b>	<b>100%</b>
360 rating	10%
Science project	10%
Medical history	20%
Border control 2	60%
<b>Total for BC -2</b>	<b>100%</b>

**Final score:** OAR 60% + exam 40%

**Exam (2 stages)** – MSQ testing (40%) + OSKE (60%)

**Team based learning – TBL**

	%
<b>Individual -- (IRAT)</b>	<b>30</b>
<b>Group -- (GRAT)</b>	<b>20</b>
<b>Appeal</b>	<b>10</b>
<b>Case rating</b>	<b>20</b>
<b>Companion rating (bonus)</b>	<b>10</b>
<b>Self-rating</b>	<b>10</b>
	<b>100%</b>

**Case-based learning CBL**

		%
1	<b>Interpreting survey data</b>	10
2	<b>Interpretation of physical examination findings</b>	10
3	<b>Preliminary diagnosis, justification, PD, examination plan</b>	10
4	<b>Interpretation of lab-instrumental examination data</b>	10

5	<b>Clinical diagnosis, problem sheet</b>	10
6	<b>Management and treatment plan</b>	10
7	<b>The validity of the choice of drugs and treatment regimens</b>	10
8	<b>Evaluation of effectiveness, prognosis, prevention</b>	10
9	<b>Special problems and questions on the case</b>	10
10	<b>Companion rating (bonus)</b>	
		<b>100%</b>

**Tasks for the DEADLINE, the Schedule of their implementation, Methodological guidelines for them**

**Independent work of the student with the teacher: 20 hours**

- work in small groups during school hours
- practicing practical skills in the Simulation Center according to scenarios
- participation in the SSS of the department, presentations at conferences
- curation of a tuberculosis patient with writing a medical history

**Extracurricular independent work of the student: 20 hours**

- study of special medical literature
- work with electronic information resources, including medical portals on the Internet
- creation of a presentation on the proposed SRO topics and presentation at the specified lesson

Schedule of SRO implementation

Individual task – creation of a medical simulation scenario or an algorithm for diagnosis and treatment on the proposed topics

№	Tasks for the SRS*	The content of the SRS	The form of the SRS completion	Dates of the SRS** (school week)

1	Prevention and early detection of tuberculosis. Informational and educational materials for the population and TB patients.	Prevention of tuberculosis (specific and nonspecific). Detection: sputum examination G-Xpert, FG, Mantoux-ATP test (Diaskintest), IGRA tests.	IOM (leaflets, brochures, calendars)	
2	Stigma and discrimination in tuberculosis. Stigma and discrimination are the reason for late diagnosis and separation from treatment.	Stigma and discrimination are considered to be one of the most serious barriers in the fight against the tuberculosis epidemic. Stigma hinders the search for help, contact tracing, outbreak investigation, treatment, compliance with doctors' instructions and the quality of medical care.	Essay	
3	Tuberculosis and Covid 19	Many symptoms of tuberculosis and COVID-19 coincide, therefore, during a pandemic, differential diagnosis, timely and correct treatment of these diseases is essential.	Diagnostic algorithm	
4	Tuberculous meningoencephalitis film loss, MBT G-Xpert	In tuberculous meningitis / meningoencephalitis in CSF: lymphocytic cytolysis, increase in protein, decrease in sugar, chlorides, "+" Pandey reaction, fibrin	Character of the liquor	
5	BCGits as a PID marker	Causes of post-vaccination complications of BCG: biological properties of the vaccine strain (live mycobacteria); concomitant pathology in a child during the formation of post-vaccination immunity; the state of the immune	Presentation	

		status of the child, violations of the technique of intradermal administration of the drug.		
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**360° assessment checklist for student**

**CURATOR and Lecturer**

FULL NAME of Curator \_\_\_\_\_ Signature \_\_\_\_\_

	<b>Very well</b>	<b>Criteria and points</b>	<b>Unsatisfactory</b>
<b>1</b>	<p><b>Constantly preparing for classes:</b> For example, backs up statements with relevant references, makes short summaries</p> <p>Demonstrates effective teaching skills, assists in teaching others</p>	<p><b>Preparing for classes</b></p> <p><b>10 8 6 4 2 0</b></p>	<p><b>Constantly not preparing for class</b> For example, insufficient reading and study of problematic issues, makes little contribution to the knowledge of the group, does not analyze, does not summarize the material.</p>
<b>2</b>	<p><b>Takes responsibility for their own learning:</b> For example, manages their learning plan, actively tries to improve, critically evaluates information resources</p>	<p><b>A responsibility</b></p> <p><b>10 8 6 4 2 0</b></p>	<p><b>Takes no responsibility for their own learning:</b> For example, depends on others to complete the learning plan, hides mistakes, rarely critically analyzes resources.</p>
<b>3</b>	<p><b>Actively participates in the training of the group:</b></p>	<p><b>Participation</b></p>	<p><b>Not active in the group training process:</b></p>

	For example, actively participates in discussions, willingly takes tasks	<b>10 8 6 4 2 0</b>	For example, does not participate in the discussion process, is reluctant to accept assignments
<b>4</b>	<b>Demonstrates effective group skills</b> For example, takes the initiative, shows respect and correctness towards others, helps to resolve misunderstandings and conflicts.	<b>Group skills</b>  <b>10 8 6 4 2 0</b>	<b>Demonstrates ineffective group skills</b> For example, inappropriately intervening, showing poor discussion skills by interrupting, avoiding or ignoring others, dominating or impatient
<b>5</b>	<b>Skilled in communicating with peers:</b> For example, actively listening, receptive to non-verbal and emotional cues  Respectful attitude	<b>Communications</b>  <b>10 8 6 4 2 0</b>	<b>Difficulty communicating with peers</b> For example, poor listening skills, unable or disinclined to listen to non-verbal or emotional cues  Use of obscene language
<b>6</b>	<b>Highly developed professional skills:</b> Eager to complete tasks, seek opportunities for more learning, confident and skilled  Compliance with ethics and deontology in relation to patients and medical staff  Observance of subordination.	<b>Professionalism</b>  <b>10 8 6 4 2 0</b>	<b>Clumsy, fearful, refusing to try even basic procedures</b>  Inferiority in professional behavior - causing harm to the patient, rude disrespectful attitude towards medical staff, colleagues
<b>7</b>	<b>High introspection:</b> For example, recognizes the limitations of their knowledge or abilities without becoming defensive or rebuking others.	<b>Reflection</b>  <b>10 8 6 4 2 0</b>	<b>Low introspection:</b> For example, needs more awareness of the limits of understanding or ability and does not take positive steps to correct
<b>8</b>	<b>Highly developed critical thinking:</b>	<b>Critical thinking</b>	<b>Critical Thinking Deficiency:</b>

	For example, appropriately demonstrates skill in performing key tasks such as generating hypotheses, applying knowledge to case studies, critically evaluating information, drawing conclusions aloud, explaining the process of thinking	<b>10 8 6 4 2 0</b>	For example, has difficulty completing key tasks. As a rule, does not generate hypotheses, does not apply knowledge in practice either because of their lack or because of inability (lack of induction), does not know how to critically evaluate information
<b>9</b>	Fully adheres to the rules of academic conduct with understanding, suggests improvements in order to increase efficiency.  Complies with the ethics of communication - both oral and written (in chats and appeals)	<b>Compliance with the rules of academic conduct</b>  <b>10 8 6 4 2 0</b>	Пренебрегает правилами, мешает другим членам коллектива  Neglects the rules, interferes with other members of the team
<b>10</b>	Fully follows the rules with full understanding of them, encourages other members of the group to adhere to the rules  Strictly adheres to the principles of medical ethics and PRIMUM NON NOCERE	<b>Compliance with the rules of conduct in the hospital</b>  <b>10 8 6 4 2 0</b>	Breaks the rules.  Encourages and provokes other members of the group to break the rules  Creates a threat to the patient
	Maximum	<b>100 points</b>	

\* gross violation of professional behavior, rules of conduct in the hospital - or a decrease in the grade for boundary control or cancellation; ethical committee

Such violations are a threat to the health of patients due to action (for example, smoking on the territory of the hospital) or inaction; rudeness and rudeness towards any person (patient, classmate, colleague, teacher, doctor, medical staff)

**Point-rating assessment (check-list) of medical history management (maximum 100 points)**

№	Criteria	10	8	6	4	2
		<i>Excellent</i>	<i>Good</i>	<i>Satisfactory</i>	<i>Need correction</i>	<i>Bad</i>
1	Patient complaints: major and minor	Completely and systematically, with an understanding of important details	Accurate and complete	basic information	Incomplete or inaccurate, some details are missing	Misses important
2	Collecting an anamnesis of the disease					
3	Anamnesis of life					
4	Objective status - general examination	Completely and systematically, with an understanding of important details	Consistently and correctly	Identification of main data	Incomplete or not quite correct, not attentive to patient comfort	Inappropriate data
5	<b>Nervous system</b>		Complete, effective, technically correct application of all examination skills, physical examination with minor errors, or corrected during execution	Revealed basic data  Physical examination skills learned	Incomplete or Inaccurate  Physical examination skills need to be improved	Important data are missing.  Inappropriate physical examination skills



6	Medical history presentation	Maximum full description and presentation  Understands the problem in a complex, connects with the patient's features	precise, focused; choice of facts shows understanding	Record is by form, includes all basic information;	Many important omissions, inaccurate or unimportant facts are often included	Lack of control of the situation, many important omissions, many clarifying questions

**Point-rating assessment (check-list) of the ISW (independent student's work) - creative task (maximum 90 points) + bonuses for English and time management**

		<b>10</b>	<b>8</b>	<b>4</b>	<b>2</b>
<b>1</b>	<b>Problem solving</b>	The organized concentrated, allocates all questions which are falling into to the main revealed problem with a comprehension of a concrete clinical situation	Organized, the concentrated, allocates all questions which are falling into to the main revealed problem, but there is no comprehension of a concrete clinical situation	Not the concentrated, Derivation on the questions which are not falling into to the main revealed problem	Inaccurate, misses the main thing, disharmonious data.
<b>2</b>	<b>Information</b>	All necessary information on a subject in the free, serial, logical manner is completely conveyed	All necessary information in a logical manner, but with shallow inaccuracies is conveyed	All necessary information on a subject is explained chaotically, with not gross errors	Important information on a subject, gross errors is not reflected

		The product form is adequately chosen			
3	<b>Significance</b>	Material is chosen on the basis of authentically established facts.  Manifestation of a comprehension on the level or quality of proofs	Some conclusions and the conclusions are formulated on the basis of assumptions or the incorrect facts. There is no complete comprehension of level or quality of proofs	Not the sufficient comprehension of a problem, some conclusions and the conclusions are based on the inexact and not proved data – doubtful resources are used	Conclusions and the conclusions are not proved or irregular
4	<b>Logic</b>	logical and well reasoning, has internal unity, provisions in a product follow one of another and are logically interdependent between themselves	Has internal unity, provisions of a product one of another follows, but there are inaccuracies	There is no sequence and logicity in statement, but it is possible to keep track of the main idea	Jumps from one on another, it is difficult to catch the main idea
5	<b>Recourses</b>	Literary data are submitted in logical interrelation, show deep study of the main and padding informational resources	Literary data show study of the main literature	Only ordinary recourses	Inconsistency and randomness in statement of data, an inconsistency  There is no knowledge of the main textbook  Using of Google
6	<b>Practical application</b>	High	Good	moderate	no
7	<b>Patient focusing</b>	High	Good	moderate	no

<b>8</b>	<b>Applicability in future practice</b>	High	Good	moderate	no
<b>9</b>	<b>Preseantion</b>	Correctly, to the place all opportunities of Power Point or other e-softs, the free possession of material, a sure manner of statement are used	It is overloaded or are insufficiently used visual materials, inexact possession of material	Visual materials are not informative	Does not own material, is not able to explain it
<b>b o n u s</b>	<b>Time management*</b>	10 For before deadline	In time	Good quality but a little late Minus 2-4	After deadline more than 24 hours Minus 10
<b>b o n u s</b>	<b>Rating**</b>	10 points additional	Outstanding work, for example: The best work in group Creative approach Innovative approach to realization of a task According to the proposal of group		
* The deadline is determined by the teacher, as a rule - the day of the boundary control ** thus, you can get 90 points as much as possible, to get above 90-you need to show a result higher than expected					

