MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

Petro Mohyla Black Sea National University

Medical Institute

Department of Therapeutic and Surgical Disciplines

"APPROVE "
First Vice-Rector
Ishchenko NM
_____
"__" _____ 2021

CURRICULUM WORK PROGRAM

PHTHISIOLOGY

Field of knowledge 22 "Health"
(code and name of the field of knowledge)
C petsialnist 222 "Medicine" - each second (master th) ing e n b
(code and name of the specialty)

Developer	Zack M.Yu.
Head of the Department of Developer	Zack M.Yu.
Guarantor of the educational program	Klymenko MO
Director of the Institute	Grishchenko GV
Chief of NMV	Shkirchak SI

Mykolaiv - 2021

Description of the discipline

Characteristic	**Characteristics of the discipline**	
Name of discipline	Tuberculosis	
Branch of knowledge	22 "Health care	
Specialty	222 "Medicine"	
Specialization (if any)		
Educational program	Medicine	
Level of higher education	Master	
Discipline status	Normative	
Curriculum	5 th	
Academic year	2020-2021	
Semester numbers:	Full-time	Correspondence form
	9 th	
Total number of ECTS credits / hours	3 credits (3 , 0) / 90 hours	
Course structure: - lectures - practical classes - hours of independent work of students	Full-time	Correspondence form
	8 24 58	
Percentage of classroom load	36 %	
Language of instruction	ENGLISH	
Form of intermediate control (if any)		
Form of final control	Differential credit - 9th semester	

2. Purpose, tasks and planned learning outcomes

The purpose of the discipline " Phthisiology" is determined by the current state of phthisiology service in Ukraine in the context of deteriorating epidemiological situation of tuberculosis and the need for an appropriate level of phthisiology knowledge of the future general practitioner, family doctor. Qualification characteristics of the doctor require knowledge of methods of early detection, prevention, diagnosis and differential diagnosis of tuberculosis in children, adolescents and adults.

Learning objectives: the main task of the lecture course is to acquaint students with modern methods of prevention, early detection, the latest methods of diagnosis and differential diagnosis of various forms of tuberculosis. The principles and tasks of the organization of tuberculosis control at different levels of medical care are stated. The practical classes aim to master the methods of examination of patients with pulmonary tuberculosis, clinical-radiological, instrumental and laboratory diagnosis of clinical forms of tuberculosis, diagnosis of various clinical forms of tuberculosis and general principles of their treatment.

Prerequisites for studying the discipline (interdisciplinary links). Tuberculosis as a discipline :

a) is based on students' understanding of basic principles and knowledge of anatomy, histology, medical and biological physics, bioorganic, bioorganic and biological chemistry, biology, normal physiology, microbiology and integrates with these disciplines;

b) creates a theoretical basis for students to master clinical disciplines (internal medicine, surgery, obstetrics and gynecology, clinical pharmacology, pediatrics, anesthesiology, etc.), which involves both the integration of teaching with basic clinical disciplines and the acquisition of in-depth knowledge of pathophysiology, skills use this knowledge in the process of further training and in the professional activity of a doctor;

c) forms the methodological foundations of clinical thinking;

d) provides the possibility of pathophysiological analysis of clinical situations for further diagnosis, treatment, prevention of diseases.

Expected learning outcomes. As a result of studying the discipline, students have:

- Master the theoretical knowledge needed to detect human tuberculosis;
- Master the practical techniques and methods of physical and laboratory-instrumental examination of patients with tuberculosis.
- To master the general methodical approaches of clinical examination of the patient in an outpatient setting and a tuberculosis hospital;
- Diagnosis of certain forms of human tuberculosis with their typical manifestations;

- Formation of moral and ethical and deontological qualities in students in professional communication with a patient with tuberculosis;
- Justify and formulate a preliminary diagnosis of various forms of human tuberculosis;
- Make a plan to examine the patient, interpret the results of laboratory and instrumental studies in tuberculosis and their complications.
- Carry out differential diagnosis, substantiate and formulate a clinical diagnosis of the main forms of tuberculosis.
- Determine the tactics of management (recommendations regarding the regime, diet, treatment, rehabilitation measures) of a patient with tuberculosis.
- Prescribe non-drug and drug treatment, including prognosis-modifying, patients with tuberculosis.
- Carry out non-drug and drug primary and secondary prevention of tuberculosis at the outpatient stage.
- To determine the prognosis and efficiency of patients with tuberculosis.
- Diagnose and provide emergency medical care for tuberculosis.
- Apply the basic algorithms of intensive care in emergencies in a tuberculosis clinic
- Perform medical manipulations.
- Get acquainted with the maintenance of medical records in a tuberculosis clinic.
- Demonstrate mastery of moral and deontological principles of a medical specialist and the principles of professional subordination.

According to the requirements of the educational and professional program, students must:

KNOW :

- Clinical forms of tuberculosis and formulate a clinical diagnosis according to the classification.
- Identify risk factors for tuberculosis.
- Explain the importance of bacterioscopic and bacteriological methods of sputum research.
- Explain the basic principles of treatment of patients with tuberculosis and determine the criteria for their treatment.
- Use the principles of medical examination of persons at risk of tuberculosis and the principles of tuberculosis prevention.

BE ABLE:

- to solve situational problems with the definition of causal factors, risk factors, the main link of pathogenesis, stages of development, mechanisms of development of clinical manifestations, options for completion of the main forms of tuberculosis;
- schematically reflect the mechanisms of pathogenesis and clinical manifestations of tuberculosis;
- analyze and interpret the results of blood, urine, lipidogram, electrocardiogram, spirogram, immunogram, hormonal background, in tuberculosis patients with concomitant pathology;
- identify regenerative, degenerative, and forms of pathological regeneration of "red" and "white" blood cells in peripheral blood smears; interpret their presence or absence in the blood;
- on the basis of the results of laboratory and instrumental research to assess the state of functioning of organs and systems of the body in tuberculosis;
- to analyze different options for the development of causal relationships in the pathogenesis of tuberculosis;
- be able to identify and record the leading clinical syndrome, its main link and clinical signs;
- make an informed decision for the appointment of laboratory and / or instrumental examination.
- Demonstrate the ability to keep medical records in a tuberculosis clinic.
- Diagnose and provide emergency care in emergencies in patients with tuberculosis.
- Classify the foci of tuberculosis infection and use in them the principles of anti-tuberculosis measures.
- To plan the scheme of examination of a patient with tuberculosis, to analyze the obtained data and to determine the treatment regimens of patients with different clinical forms of tuberculosis.

COMPETENCE

- on the application of knowledge in tuberculosis for the diagnosis of tuberculosis, treatment, promotion of a healthy lifestyle, as well as for the prevention and development of diseases;
- on the main promising research methods in tuberculosis for early diagnosis and treatment of the most common forms of tuberculosis according to unified medical protocols.

The developed program corresponds to the ***educational-professional program*** and is focused on the formation of ***competencies:***

general (GC) - GC1-GC 10 :

GC 1. Ability to abstract thinking, analysis and synthesis, the ability to learn and master modern knowledge.

GC 2. Ability to apply knowledge in practical situations.

GC 3. Knowledge and understanding of the subject area and understanding

professional (PC) - PC1 - PC6, PC 11, PC 16, PC 18 :

- PC1. Patient interviewing skills.
- PC2. Ability to determine the required list of laboratory and instrumental studies and evaluate their results.
- PC3. Ability to establish a preliminary and clinical diagnosis of the disease.
- PC 4. Ability to determine the required mode of work and rest in the treatment of diseases.
- PC 5. Ability to determine the nature of nutrition in the treatment of diseases.
- PC 6. Ability to determine the principles and nature of disease treatment.
- PC 11. Skills to perform medical manipulations.
- PC 16. Ability to determine the tactics of management of persons subject to dispensary supervision.
- PC 18. Ability to keep medical records.

According to the educational-professional program, the expected ***program learning outcomes (PLO)*** include skills ***PLO -10, PLO 13- PLO 17, PLO 21- PLO 28, PLO 30, PLO 32, PLO 33, PLO 35, PRN 41: OPP*** :

- ***PLO* 10:** Know the problems of environmental protection and ways to preserve it. Be able to form requirements for themselves and others to preserve the environment. Make proposals to the relevant authorities and institutions on measures to preserve and protect the environment. Be responsible for the implementation of environmental protection measures within its competence.

- ***PLO* 13.** In the conditions of a health care institution, its subdivision and among the attached population:

-Be able to identify and record the leading clinical symptom or syndrome (according to list 1) by making an informed decision, using previous patient history, physical examination data , knowledge of the person, his organs and systems, adhering to relevant ethical and legal norms.

- Be able to establish the most probable or syndromic diagnosis of the disease (according to list 2) by making an informed decision, by comparing with standards, using previous patient history and examination of the patient, based on the leading clinical symptom or syndrome, using knowledge about the person, his organs and systems, adhering to the relevant ethical and legal norms.

- ***PLO* 14.** In the conditions of a health care institution, its subdivision:

• Assign a laboratory and / or instrumental examination of the patient (according to list 4) by making an informed decision, based on the most probable or syndromic diagnosis, according to standard schemes, using knowledge about the person, his organs and systems, adhering to relevant ethical and legal norms.

• Carry out differential diagnosis of diseases (according to list 2) by making an informed decision, according to a certain algorithm, using the most probable or syndromic diagnosis, laboratory and instrumental examination of the patient, knowledge of the person, his organs and systems, adhering to ethical and legal norms.

• Establish a preliminary clinical diagnosis (according to list 2) by making an informed decision and logical analysis, using the most probable or syndromic diagnosis, laboratory and instrumental examination data , conclusions of differential diagnosis, knowledge of the person, his organs and systems, adhering to relevant ethical and legal norms.

- ***PLO* 15** . Determine the necessary mode of work and rest in the treatment of the disease (according to list 2), in a health care facility, at home of the patient and at the stages of medical evacuation, including in the field, on the basis of preliminary clinical diagnosis, using knowledge of man, his organs and systems, adhering to the relevant ethical and legal norms, by making an informed decision according to existing algorithms and standard schemes.

- ***PLO* 16** . Determine the necessary medical nutrition in the treatment of the disease (according to list 2), in a health care facility, at the patient's home and at the stages of medical evacuation, including in the field on the basis of preliminary clinical diagnosis, using knowledge about the person, his bodies and systems, adhering to the relevant ethical and legal norms, by making an informed decision according to existing algorithms and standard schemes.

***PLO* 17** . Determine the nature of treatment (conservative, operative) of the disease (according to list 2), in a health care facility, at home at the patient and at the stages of medical evacuation, including in the field on the basis of a previous clinical diagnosis, using knowledge about the person , its bodies and systems, adhering to the relevant ethical and legal norms, by making an informed decision according to existing algorithms and standard schemes. Determine the principles of treatment of the disease (according to list 2), in a health care facility, at the patient's home and at the stages of medical evacuation, including field conditions, based on a preliminary clinical diagnosis, using knowledge about the person, his organs and systems , adhering to the relevant ethical and legal norms, by making an informed decision according to existing algorithms and standard schemes.

- ***PLO* 22** . Perform medical manipulations (according to list 5) in a medical institution, at home or at work on the basis of previous clinical diagnosis and / or indicators of the patient's condition, using knowledge of the person, his organs and systems, adhering to relevant ethical and legal norms, by making informed decisions and using standard techniques.

- ***PLO* 25.** To form, in the conditions of a health care institution, its division on production, using the generalized procedure of an assessment of a state of human health, knowledge of the person, its bodies and systems, adhering to the corresponding ethical and legal norms, by acceptance of the reasonable decision, among the fixed contingent of the population:
dispensary groups of patients;
groups of healthy people subject to dispensary supervision (newborns, children, adolescents, pregnant women, representatives of professions that must undergo a mandatory dispensary examination).

- ***PLO* 28.** Organize secondary and tertiary prevention measures among the assigned population, using a generalized procedure for assessing human health (screening, preventive medical examination, seeking medical care), knowledge about the person, his organs and systems, adhering to the relevant ethical and legal norms, by making an informed decision, in the conditions of a health care institution, in particular:
to form groups of dispensary supervision;
to organize medical and health-improving measures differentiated from the group of medical examination.

- ***PLO* 30.** To be carried out in the conditions of a health care institution, its subdivision:
• detection and early diagnosis of infectious diseases (according to list 2);
***** primary anti-epidemic measures in the center of an infectious disease.

- ***PLO* 32** . In the health care facility, or at the patient's home on the basis of the obtained data on the patient's health, using standard schemes, using knowledge about the person, his organs and systems, adhering to relevant ethical and legal norms, by making an informed decision:
determine the tactics of examination and secondary prevention of patients subject to dispensary supervision; determine the tactics of examination and primary prevention of healthy individuals subject to dispensary supervision; calculate and prescribe the necessary food for children in the first year of life.

- ***PLO* 33** . To determine the presence and degree of restrictions on life, type, degree and duration of

disability with the issuance of relevant documents in a health care institution on the basis of data on the disease and its course, features of professional activity.

- *PLO* 35 . On the territory of service according to standard methods of descriptive, analytical epidemiological and medical-statistical researches: • conduct screening for the most important non-communicable diseases; evaluate in the dynamics and in comparison with the average static data indicators of morbidity, including chronic non-communicable diseases, disability, mortality, integrated health indicators; identify risk factors for the occurrence and course of diseases;
to form risk groups of the population.

- *PLO* 41. In the conditions of a health care institution or its subdivision according to standard methods: • select and use unified clinical protocols for the provision of medical care, developed on the basis of evidence-based medicine; • participate in the development of local protocols for medical care; • control the quality of medical care on the basis of statistical data, expert evaluation and sociological research data using indicators of structure, process and results of activities; • identify factors that hinder the improvement of the quality and safety of medical care.

3. The program of the discipline

The educational process is organized according to the European Credit Transfer and Accumulation System (ECTS). 90 hours are allocated for studying the discipline , 3 credits (3.0) of them: 10 hours. lectures, 30 hours practical classes and 50 hours. independent work.

The curriculum consists of two blocks:

BLOCK 1. GENERAL APPROACHES TO THE DIAGNOSIS, TREATMENT AND PREVENTION OF TUBERCULOSIS

SECTIONS:

1. METHODS OF EXAMINATION OF A PATIENT WITH TUBERCULOSIS.
2. TREATMENT AND PREVENTION OF A PATIENT WITH TUBERCULOSIS .

BLOCK 2. PRIMARY AND SECONDARY FORMS OF TUBERCULOSIS. DIAGNOSIS, TREATMENT AND PREVENTION.

SECTIONS:

3. PRIMARY FORMS OF TUBERCULOSIS. COMPLICATIONS OF PRIMARY FORMS OF TUBERCULOSIS. TUBERCULOSIS IN PATIENTS WITH HIV / AIDS.

4. SECONDARY FORMS OF TUBERCULOSIS (PULMONARY AND AFTER PULMONARY). COMPLICATIONS OF SECONDARY FORMS OF TUBERCULOSIS.

BLOCK 1. GENERAL APPROACHES TO THE DIAGNOSIS, TREATMENT AND PREVENTION OF TUBERCULOSIS

SECTION 1. Methods of examination of a patient with tuberculosis

Specific objectives of the section:

• Identify categories of the population from the group of increased risk of tuberculosis.
• Identify clinical signs of tuberculosis.
• Determine the role of bacterioscopic and bacteriological methods of sputum research.
• Determine the type of resistance of the Office according to bacteriological examination.
• Analyze the main radiological syndromes in the tuberculosis clinic.
• To determine the tactics of doctors of general medical network institutions in relation to patients according to their X-ray examination and bacterioscopic examination of sputum.
• Interpret the goals of tuberculin testing.
• Analyze the results of the Mantoux test with 2 TO PPD-L.
• Explain the concept of tuberculin test "turn" and its significance for early diagnosis of tuberculosis.
• Analyze the main indicators of the function of external respiration.

Topic 1. General approaches to the diagnosis of tuberculosis. Special methods of detection and diagnosis of tuberculosis (microbiological diagnostics, X-ray diagnostics, tuberculin diagnostics). Curation of patients.

Ways and methods of tuberculosis detection. Categories of the population with an increased risk of tuberculosis. Features of clinical examination of a patient with tuberculosis: complaints, anamnesis of the disease, course, epidemiological anamnesis, transferred diseases, working and living conditions; physical methods of examination: the importance of palpation, percussion and auscultation in the examination of a patient with tuberculosis; diagnostic value of changes in the

general analysis of blood at patients with pulmonary tuberculosis; basic indicators of the function of external respiration.

Microbiological diagnostics: methods of bacterioscopic, bacteriological and biological detection of the Office, the value of their results for the diagnosis of tuberculosis. Accelerated methods of MBT detection: VASTEC, enzyme-linked immunosorbent assay, polymerase chain reaction (PCR). Determination of the sensitivity of the Office to anti-TB drugs. Methods of X-ray examination of patients with tuberculosis of the respiratory organs and intrathoracic lymph nodes. X-ray, tomo- and fluorography, computed tomography, radioscopy. Radiological syndromes: lesions of the lung root, dissemination, infiltration, round shadow, cavity, fibrosis. Clinical forms of pulmonary tuberculosis in the X-ray image. Analysis of X-ray, tomo- and fluorograms.

Population groups subject to mandatory annual fluorographic examination. Options for tactical actions for doctors of general medical network in the detection of tuberculosis. Objectives of tuberculin diagnosis. Categories of children and adolescents at risk of annual tuberculin testing. The concept of tuberculin. Modern tuberculin tests. Mantoux test with 2 TO PPD-L: indications, technique and evaluation of its results. The concept of "turn" of the tuberculin test. Differential diagnosis of post-vaccination and infectious immunity.

SECTION 2. Treatment and prevention of tuberculosis.

Specific goals:

• Interpret the basic principles of treatment of patients with tuberculosis.
• Diagnose the side effects of anti-TB drugs and determine measures for their prevention.
• Determine standard regimens of antimycobacterial therapy depending on the category of treatment.
• Determine the criteria for the treatment of patients with tuberculosis.
• Analyze tuberculosis prevention.
• Determine indications and contraindications to BCG vaccination and revaccination.
• Diagnose complications of BCG vaccination (revaccination).
• Determine the epidemiological danger of tuberculosis outbreaks.
• Use a set of preventive measures in the centers of tuberculosis infection.

Topic 2. General principles of treatment of patients with tuberculosis. Antimycobacterial drugs. Standard treatment regimens for patients with tuberculosis. Curation of patients.

General principles of antimycobacterial therapy: complexity, combination, controllability, two-phase treatment, duration and continuity, individual approach, step sequence, free of charge. Antituberculous drugs: classification, doses, methods and frequency of administration to the patient. Adverse reactions to antimycobacterial drugs, their prevention and elimination methods. Criteria for the treatment of patients with tuberculosis. Categories of treatment of patients with tuberculosis.

Treatment regimens for DOTS, DOTS plus programs. Monitoring the condition of patients with tuberculosis during treatment.

Topic 3. Nonspecific therapy of patients with tuberculosis (hygienic-dietary regime, pathogenetic, symptomatic treatment). Surgical treatment. Spa treatment. Curation of patients.

Hygienic and dietary regime in the tuberculosis clinic. Pathogenetic treatment in the intensive phase (anti-inflammatory, detoxification therapy, elimination of side effects of antimycobacterial drugs) and in the maintenance phase (general strengthening therapy). Immunocorrective therapy. Symptomatic treatment, physiotherapy.

The main surgical methods of treatment for respiratory tuberculosis (lung surgery, pleural surgery). Indication. Contraindication. Spa treatment of patients with tuberculosis. Examination of working capacity.

Topic 4. Tuberculosis prevention. Curation of patients.

Social prevention. Infection control. Sanitary prevention, its tasks. The concept of the focus of tuberculosis infection. Categories of cells according to the degree of epidemiological danger. Work in the center of tuberculosis infection on tuberculosis prevention. Measures to prevent tuberculosis among people working in anti-tuberculosis institutions. Prevention of human infection from animals with tuberculosis. Sanitary and educational work. Primary prevention (BCG and BCG-M vaccination, BCG revaccination). BCG and BCG-M vaccine. Vaccination and revaccination techniques. Contraindications to BCG vaccination. Indications for BCG-M vaccination. BCG revaccination and contraindications to it. Assessment of local reactions to the vaccine. Complications of TB vaccinations. Secondary prevention (chemoprophylaxis) of tuberculosis, indications, methods.

BLOCK 2. PRIMARY AND SECONDARY FORMS OF TUBERCULOSIS. DIAGNOSIS, TREATMENT AND PREVENTION.

SECTION 3: Primary forms of tuberculosis. Complications of primary forms of tuberculosis. Tuberculosis in patients with HIV / AIDS

Specific objectives of the section:

• Describe the main radiological syndromes in primary forms of tuberculosis.

• To diagnose primary forms of tuberculosis on the basis of anamnestic, clinical and radiological, laboratory data.
• Formulate a clinical diagnosis of primary forms according to the classification.
• Prescribe complex therapy for various forms of primary tuberculosis.
• Diagnose complications of primary forms of tuberculosis.

Topic 5. Tuberculosis of unknown location. Tuberculosis of intrathoracic lymph nodes. Primary tuberculosis complex. Pathogenesis, pathomorphology, clinic, diagnosis, differential diagnosis, treatment, consequences. Complications of primary forms of tuberculosis. Features of the course of primary tuberculosis in children and adolescents. Curation of patients

Morphological basis of tuberculosis of unknown location. Clinical manifestations, course. Differential diagnosis of tuberculosis of unknown location with helminthiasis, rheumatism, chronic tonsillitis. Treatment. Classification of intrathoracic lymph nodes. Clinical and radiological forms of tuberculous bronchoadenitis: infiltrative, tumorous, "small", indurative. Pathogenesis, pathomorphology, clinic, course. Differential diagnosis with nonspecific adenopathies (pertussis, measles, viral infections), lymphogranulomatosis, sarcoidosis. Treatment. Consequences.

Pathogenesis and pathomorphology of the primary tuberculosis complex. Clinical manifestations, course, diagnosis. Differential diagnosis with nonspecific pneumonia, eosinophilic infiltrate. Treatment. Consequences. Residual changes of the primary tuberculosis complex and their significance for the occurrence of secondary forms of tuberculosis. Complications of tuberculosis of intrathoracic lymph nodes (atelectasis, asphyxia, hematogenous or lympho-hematogenous dissemination, pleurisy) and primary tuberculosis complex (atelectasis, asphyxia, specific bronchial lesions, broncho-nodular hematogenitis and fistula caverns), their prevention, diagnosis, treatment.

Peculiarities of primary forms of tuberculosis in children and adolescents (high skin sensitivity to tuberculin, paraspecific reactions, significant involvement in the lymphatic system, tendency to generalize in children with reduced immunity, under favorable conditions - a tendency to heal without treatment).

Topic 6. Pulmonary tuberculosis, combined with occupational dust diseases.

Tuberculosis in patients with HIV / AIDS. Clinic. Diagnosis. Features of the course and treatment. Organization of medical care for patients with tuberculosis. Curation of patients with pneumoconiosis. Classification, pathomorphology, forms, course. Radiological characteristics of the stages of pneumoconiosis. Silicosis. Differential diagnosis with pulmonary tuberculosis. Silicotuberculosis. Clinic, treatment.

Causes of tuberculosis in AIDS patients. The most common forms, course, treatment of tuberculosis in AIDS patients. Levels of medical care provided by anti-tuberculosis institutions.

Volumes of medical care in anti-tuberculosis institutions (diagnosis and treatment of tuberculosis, outpatient care, inpatient treatment, sanatorium treatment). Tasks of the anti-tuberculosis dispensary, methods and organization of its work. Categories of dispensary accounting. Early, timely, untimely and late detection of tuberculosis.

Participation of health professionals in the detection of tuberculosis. State sanitary and epidemiological supervision.

SECTION 4. Secondary forms of tuberculosis (pulmonary and extrapulmonary). Complications of secondary forms of tuberculosis

Specific goals:

• Describe the main radiological syndromes in secondary forms of tuberculosis.
• To diagnose secondary forms of tuberculosis on the basis of anamnestic, clinical and radiological, laboratory data.
• Formulate a clinical diagnosis of secondary forms according to the classification.
• Prescribe complex therapy for various forms of secondary tuberculosis.
• Diagnose complications of secondary forms of tuberculosis.
• Provide emergency care in emergencies in patients with tuberculosis.
• To diagnose tuberculosis on the basis of anamnestic, clinical and radiological, laboratory data.

Topic 7. Disseminated pulmonary tuberculosis. Miliary tuberculosis. Tuberculosis of the nervous system and meninges. Pathogenesis, pathomorphology, clinic, diagnosis, differential diagnosis, treatment, consequences. Curation of patients.

Pathogenesis and pathomorphology of disseminated pulmonary tuberculosis. Clinical variants of the course (acute, subacute, chronic) and their radiological features. Clinic, diagnosis. Differential diagnosis with nonspecific pneumonia, pneumoconiosis, carcinomatosis. Treatment. Consequences. Complications of disseminated tuberculosis (pleurisy, lesions of the bronchi, larynx and other organs).

Pathogenesis and pathomorphology of miliary tuberculosis. Clinical options. Diagnosis. Differential diagnosis with miliary carcinomatosis, sepsis. Treatment. Consequences.

Pathogenesis and pathomorphology of tuberculous meningitis. Clinic, features of diagnosis and course. Methods of examination of a patient with tuberculous meningitis. Spinal puncture and interpretation of cerebrospinal fluid test results. Differential diagnosis. Treatment. Consequences. Forecast.

Topic 8. Focal and infiltrative pulmonary tuberculosis. Caseous pneumonia.

Pulmonary tuberculoma. Fibrocavernous and cirrhotic pulmonary tuberculosis. Pathogenesis, pathomorphology, clinic, diagnosis, differential diagnosis, treatment, consequences. Complications of secondary forms of tuberculosis: hemoptysis, pulmonary hemorrhage, spontaneous pneumothorax, chronic pulmonary heart disease, amyloidosis of internal organs. Pathogenesis, clinic, diagnosis, treatment. Curation of patients

Pathogenesis and pathomorphology. Methods of detection, clinic and course of focal and infiltrative forms of tuberculosis. Methods for determining the activity of tuberculosis foci. The reasons for the progression of focal tuberculosis and the formation of common processes. Clinical and radiological variants of infiltrates. Differential diagnosis of focal tuberculosis with nonspecific pneumonia; infiltrative tuberculosis - with pleuropneumonia, lung cancer, eosinophilic infiltrate. Treatment. Consequences.

Clinical and radiological variants of caseous pneumonia, features of their course. Differential diagnosis of caseous pneumonia with nonspecific pneumonia. Treatment. Consequences.

Classification of pulmonary tuberculosis. Features of the clinical course of pulmonary tuberculoma. Differential diagnosis of pulmonary tuberculoma with peripheral cancer, echinococcal cyst. Treatment. Consequences. Causes of fibrocavernous pulmonary tuberculosis. Pathogenesis, pathomorphology, main clinical syndromes, radiological signs of fibro-cavernous and cirrhotic pulmonary tuberculosis. Options for the clinical course. Differential diagnosis of fibrocavernous pulmonary tuberculosis with chronic abscess, cancer; cirrhotic pulmonary tuberculosis - with post-tuberculous cirrhosis. Treatment. Consequences. Pathogenesis, clinic, diagnosis and principles of treatment of hemoptysis, pulmonary hemorrhage, spontaneous pneumothorax, chronic pulmonary heart disease and amyloidosis. Providing emergency care for pulmonary hemorrhage, spontaneous pneumothorax.

Topic 9. Tuberculous pleurisy (including empyema). Pathogenesis, pathomorphology, clinic, diagnosis, differential diagnosis, treatment, consequences. Curation of patients. Protection of medical history

Pathogenesis, pathomorphology and classification of tuberculous pleurisy. The main clinical syndromes of pleurisy. Modern diagnostic methods. Indications for pleural puncture, methods of its implementation. Differential diagnosis of tuberculous pleurisy with pleurisy in pneumonia. Treatment. Consequences. Protection of medical history.

Topic 10. Tuberculosis of peripheral lymph nodes. Tuberculosis of bones and joints. Clinic, diagnosis, treatment. Curation of patients.

Pathogenesis and pathomorphology. Local and general manifestations. Clinical forms of tuberculosis of peripheral lymph nodes. Diagnosis. Treatment. Clinic of tuberculosis of bones and joints. Diagnosis. Treatment.

4. STRUCTURE OF THE COURSE " FTI ZIATRIA"

Names of sections of the discipline and topics	Number of hours				
	Full-time				
	Total	Including			
		L.	P	Ind.	S.R.
1	2	3	4	5	6
BLOCK 1. GENERAL APPROACHES TO THE DIAGNOSIS, TREATMENT AND PREVENTION OF TUBERCULOSIS					
Semantic section 1. Methods of examination of a patient with tuberculosis					
Topic 1. Etiology. Pathogenesis of tuberculosis. General approaches to the diagnosis of tuberculosis.	11	1	4	0	66
Topic 2. Special methods of detection and diagnosis of tuberculosis (microbiological diagnostics, X-ray diagnostics, t uberculin diagnostics. Curation of patients.	6			0	6
Together under section 1, hours **Credits ECTS - 0 7 5**	**17**	**1**	**4**	**0**	**12**
Content section 2. Treatment and prevention of tuberculosis.					
Topic 3 . General principles of treatment of patients with tuberculosis. Characteristics of antimycobacterial drugs.	8		2	0	6
Topic 4 . Standard treatment regimens for patients with tuberculosis (hygienic-dietary regime, pathogenetic, symptomatic treatment). Surgical treatment. Spa treatment.	9	1	2	0	6

Tuberculosis prevention. Curation of patients					
Topic 5 . P idsumkove (intermediate) classes for the semantic unit 1	2	0	2	0	0
Together under section 2, hours **Credit s ECTS - 0 7 5**	**1 9**	**1**	**6**		**12**
Together for the content block 1, hours **Credits ECTS - 1,5**	**36**	**2**	**10**	**0**	**24**
BLOCK 2. PRIMARY AND SECONDARY FORMS OF TUBERCULOSIS. DIAGNOSIS, TREATMENT AND PREVENTION. *Semantic section 3. Primary forms of tuberculosis. Complications of primary forms of tuberculosis*					
Topic 6 . Tuberculosis of unknown location. Tuberculosis of intrathoracic lymph nodes. Primary tuberculosis complex. Pathogenesis, pathomorphology, clinic, diagnosis, differential diagnosis, treatment, consequences. Complications of primary forms of tuberculosis.	7	1	2	0	4
Topic 7. Features of primary tuberculosis in children and adolescents. Tuberculosis in patients with HIV / AIDS. Curation of patients	9	1	2	0	6
Together under section 3, hours **Credit s ECTS - 0 7 5**	**16**	**2**	**4**	**0**	**10**
Semantic section 4. Secondary forms of tuberculosis (pulmonary and extrapulmonary). Complications of secondary forms of tuberculosis. Tuberculosis in patients with HIV / AIDS					
Topic 8 . Disseminated pulmonary tuberculosis. Miliary tuberculosis. Tuberculosis of the nervous system and meninges. Pathogenesis, pathomorphology, clinic, diagnosis, differential diagnosis, treatment, consequences. Curation of patients. Tuberculosis in patients with HIV / AIDS	9	1	2	0	6

Topic 9 . Focal and infiltrative pulmonary tuberculosis. Caseous pneumonia. Pulmonary tuberculoma. Fibrocavernous and cirrhotic pulmonary tuberculosis. Pathogenesis, pathomorphology, clinic, diagnosis, differential diagnosis, treatment, consequences. Complications of secondary forms of tuberculosis: hemoptysis, pulmonary hemorrhage, spontaneous pneumothorax, chronic pulmonary heart disease, amyloidosis of internal organs. Pathogenesis, clinic, diagnosis, treatment. Curation of patients	9	1	2	0	6
Topic 1 0 . Fibrocavernous and cirrhotic pulmonary tuberculosis. Pathogenesis, pathomorphology, clinic, diagnosis, differential diagnosis, treatment, consequences. Complications of secondary forms of tuberculosis: hemoptysis, pulmonary hemorrhage, spontaneous pneumothorax, chronic pulmonary heart disease, amyloidosis of internal organs. Pathogenesis, clinic, diagnosis, treatment. Curation of patients	9	1	2	0	6
Topic 1 1 . Tuberculous pleurisy (including empyema). Pathogenesis, pathomorphology, clinic, diagnosis, differential diagnosis, treatment, consequences. Curation of patients. Protection of medical history	9	1	2	0	6
Topic 1 2 . Final (intermediate) lesson from the content block 2	2	0	2	0	0
Together under section 4, hours **Credit s ECTS - 0 7 5**	**38**	**4**	**10**	0	**24**
Together for the content block 2, hours **Credit s ECTS - 1 , 5**	**54**	**6**	**1 4**	0	**34**
TOTAL HOURS FROM DISCIPLINE / CREDIT ECTS - 3.0	**90 / 3.0**	**8**	**24**	**0**	**5 8**

The content of the discipline

4.1. LECTURE PLAN

BLOCK 1. GENERAL APPROACHES TO THE DIAGNOSIS, TREATMENT AND PREVENTION OF TUBERCULOSIS

№з / п	Name topics	Number of hours
1.	Introduction. Determination of tuberculosis as a scientific and practical problems. History of tuberculosis. Epidemiology of tuberculosis. Characteristics of the pathogen.	2
2.	Diagnosis of tuberculosis. Special methods of detection and diagnosis of tuberculosis. General principles and methods of treatment of patients with tuberculosis.	2
TOTAL LECTURES OF BLOCK 1		***4***
BLOCK 2. PRIMARY AND SECONDARY FORMS OF TUBERCULOSIS. DIAGNOSIS, TREATMENT AND PREVENTION.		
4.	Primary forms of tuberculosis	2
5.	Tuberculosis prevention. Organization of tuberculosis detection	2
	TOTAL LECTURES BLOCK 2	***4***
	TOGETHER LECTURES ON THE DISCIPLINE	***8***

4.2. PLAN OF PRACTICAL CLASSES

№ s / n	Name topics	Count. hours
<u>BLOCK 1.</u> GENERAL APPROACHES TO THE DIAGNOSIS, TREATMENT AND PREVENTION OF TUBERCULOSIS *Content section 1.* *Methods of examination of a patient with tuberculosis*		
1	**Topic 1** . Etiology. Pathogenesis of tuberculosis. General approaches to the diagnosis of tuberculosis.	2
2	**Topic 2.** Special methods of detection and diagnosis of tuberculosis (microbiological diagnostics, X-ray diagnostics. T uberculin diagnostics. Curation of patients.	2

From city section 2. *Treatment and prevention of tuberculosis.*		
3	**Topic 3** . General principles of treatment of patients with tuberculosis. Characteristics and ntymikobakterialn s preparation s .	2
4	**Topic 4** . Standard treatment regimens for patients with tuberculosis. Nonspecific therapy of patients with tuberculosis (hygienic-dietary regime, pathogenetic, symptomatic treatment). Surgical treatment. Spa treatment. Tuberculosis prevention. Curation of patients.	2
5	**Topic 5 .** P idsumkove (intermediate) classes semantic unit 1	2
	TOGETHER OF PRACTICAL CLASSES FOR BLOCK 1	**1 0**
BLOCK 2. PRIMARY AND SECONDARY FORMS OF TUBERCULOSIS. DIAGNOSIS, TREATMENT AND PREVENTION. Contents section 3. *Primary forms of tuberculosis. Complications of primary forms of tuberculosis*		
6	**Topic 6 .** T uberculosis of unknown location. Tuberculosis of intrathoracic lymph nodes. Primary tuberculosis complex. Pathogenesis, pathomorphology, clinic, diagnosis, differential diagnosis, treatment, consequences. Complications of primary forms of tuberculosis.	2
7	**Topic 7 .** Features of the course of primary forms of tuberculosis in children and adolescents. Curation of patients. Tuberculosis in patients with HIV / AIDS.	2
Semantic section 4. Secondary forms of tuberculosis (pulmonary and extrapulmonary). Complications of secondary forms of tuberculosis. Tuberculosis in patients with HIV / AIDS		
8	**Topic 8** . Disseminated pulmonary tuberculosis. Miliary tuberculosis. Tuberculosis of the nervous system and meninges. Pathogenesis, pathomorphology, clinic, diagnosis, differential diagnosis, treatment, consequences. Curation of patients.	2
9	**Topic 9** . Focal and infiltrative pulmonary tuberculosis. Caseous pneumonia. Pulmonary tuberculoma. Pathogenesis, pathomorphology, clinic, diagnosis, differential diagnosis, treatment, consequences.	2
10	**Topic 1 0 .** Fibrocavernous and cirrhotic pulmonary tuberculosis. Pathogenesis, pathomorphology, clinic, diagnosis, differential diagnosis, treatment, consequences.	2
1 1	**Topic 1 1 .** Tuberculous pleurisy (including empyema). Pathogenesis, pathomorphology, clinic, diagnosis, treatment, consequences.	2

	Curation of patients. Protection of medical history.	
1 2	**Topic 1 2** . Final (intermediate) lesson from the content block 2	2
	TOGETHER OF PRACTICAL CLASSES BLOCK 2 **TOGETHER FROM THE DISCIPLINE**	**1 4** **24**

4.3. INDEPENDENT WORK PLAN

№ z.p.	**TOPIC**	Number of hours
BLOCK 1: GENERAL APPROACHES TO THE DIAGNOSIS, TREATMENT AND PREVENTION OF TUBERCULOSIS		
1.	Preparation for practical classes (theoretical training, development of practical skills)	**10**
2.	Online courses and online testing	**6**
3.	Independent elaboration of topics that are not included in the plan of classroom classes **(to the clinical pharmacology of anti-tuberculosis drugs)**	**4**
4.	Individual work	**4**
TOTAL BLOCK 1		**2 4**
BLOCK 2: BLOCK 2. PRIMARY AND SECONDARY FORMS OF TUBERCULOSIS. DIAGNOSIS, TREATMENT AND PREVENTION.		
1.	Preparation for practical classes (theoretical training, development of practical skills)	**14**
2.	Online courses and online testing	**8**
3.	Independent elaboration of topics that are not included in the plan of classroom classes **(features of the course of tuberculosis in pregnant women and the elderly)**	**6**
4.	Individual work	**6**
	TOTAL BLOCK 2	**34**
TOGETHER FOR TWO BLOCKS		**58**

BLOCK 1

1. Epidemiology of tuberculosis. Sources and ways of transmission of tuberculosis infection. Infection, morbidity, morbidity and mortality from tuberculosis. Prevalence of tuberculosis in countries with different levels of economic development.

2. Properties of the pathogen of tuberculosis. Types of MBT, forms of variability (persistence, reversion). Resistance of the Office to anti-TB drugs. Sustainability of the Office in the environment.

3. Infection with tuberculosis, ways of penetration and spread of mycobacteria in the human body. Local and general reactions of an organism to a tuberculosis infection. Morphological reactions in tuberculous inflammation. The structure of tuberculous granuloma.

4. Anti-tuberculosis immunity and natural resistance to tuberculosis, their mechanisms. Tuberculin diagnosis. Differential diagnosis of post-vaccination and infectious immunity.

5. Methods of tuberculosis detection. Preventive fluorographic examination of the population. Examination of sputum.

6. Options for tactical actions for institutions of the general network in the detection of tuberculosis, depending on the results of bacterioscopic and fluorographic examination.

7. Tuberculosis prevention: social, infection control, (vaccination and revaccination of BCG SSI : indications, methods), secondary (chemoprophylaxis: indications, methods).

8. Sanitary prevention of tuberculosis. A set of preventive measures carried out in the center of tuberculosis infection. Work in the center of tuberculosis infection on prevention and early detection of tuberculosis.

BLOCK 2

1. Primary tuberculosis in adults. Clinical and radiological forms, diagnosis, differential diagnosis with nonspecific pneumonia, tumors, lymph node lesions in the roots of the lungs.

2 . Disseminated pulmonary tuberculosis. Clinical forms. Differential diagnosis with sarcoidosis, pneumoconiosis, collagenosis, mycosis, disseminated lung cancer. Treatment of disseminated tuberculosis. Consequences.

3 . Focal pulmonary tuberculosis. Clinical options, diagnosis, treatment. Methods for determining the activity of tuberculosis foci. Differential diagnosis with limited pneumosclerosis, early stages of lung cancer, bronchopneumonia. Treatment of focal tuberculosis. Consequences.

4 . Infiltrative pulmonary tuberculosis. Clinical and radiological variants of infiltrates. Differential diagnosis with influenza, pneumonia, eosinophilic infiltrate, peripheral lung cancer, sarcoidosis, atelectasis. Consequences. Forecast.

5 . Caseous pneumonia. Clinic, diagnosis, differential diagnosis with nonspecific pneumonia, pulmonary infarction. Features of treatment. Consequences.

14. Pulmonary tuberculoma. Clinical and radiological variants of tuberculoma. Differential diagnosis of tuberculoma with peripheral cancer, benign tumors, aspergilloma of the lungs. Treatment and consequences depending on the size of the tuberculoma and the phase of the specific process. Consequences.

15. Fibrous-cavernous pulmonary tuberculosis. Reasons for the formation of caverns. Clinical and radiological characteristics, differential diagnosis with chronic abscess, polycystic lung disease, peripheral cancer with decay and cavity formation. Treatment of fibrocavernous pulmonary tuberculosis.

16. Cirrhotic pulmonary tuberculosis. The main clinical syndromes, radiological signs. Differential diagnosis of cirrhotic pulmonary tuberculosis with bronchiectasis, nonspecific pneumosclerosis, atelectasis. Features of treatment. Consequences.

17. Tuberculous pleurisy (including empyema). Classification. Clinical, radiological and cytological diagnosis, indications for puncture of the pleural cavity and methods of its implementation. Differential diagnosis of pleurisy in pneumonia, malignant and systemic diseases. Features of treatment. Consequences.

18. Miliary tuberculosis. Options for the clinical course. Diagnosis, treatment. Differential diagnosis with typhoid fever, sepsis, miliary carcinomatosis.

19. Tuberculosis of the nervous system of the meninges. Features of diagnosis and clinical course. Cerebrospinal puncture and interpretation of cerebrospinal fluid results. Differential diagnosis of tuberculous meningitis with viral, pneumococcal meningitis. Treatment, Consequences.

20. Tuberculosis in patients with HIV / AIDS.

21. Complications of pulmonary tuberculosis. Pathogenesis, diagnosis and principles of treatment of hemoptysis, pulmonary hemorrhage, spontaneous pneumothorax, Emergency care for complications of pulmonary tuberculosis (pulmonary hemorrhage, spontaneous pneumothorax).

22. Principles and methods of treatment of patients with tuberculosis. Modes of antimycobacterial therapy depending on the category of treatment of the patient., Pathogenetic and symptomatic therapy. Surgical methods and spa treatment.

23. Anti-tuberculosis institutions. Tasks of the tuberculosis dispensary. Categories of dispensary observation of patients with tuberculosis. Work in the center of tuberculosis infection on prevention and early detection of tuberculosis.

Individual tasks

Selection and review of scientific literature on the subject of the TB program of the student's choice with the writing of an abstract and its public defense.

Selection and review of scientific literature on the subject of research work of the department with the preparation of a scientific report at a meeting of the SNT or at student conferences.

Experimental research on the topic of research work of the department with the publication of results in scientific journals.

At the request of the student during the study of relevant topics, he can perform individual work, which is carried out in extracurricular activities and if successful, it is additionally evaluated by the teacher.

The list and content of individual tasks can be determined in each case depending on the logistics of the departments.

Approximate list of individual tasks:

1. Interrogation of an indicative patient, his general examination and examination of the head, neck, extremities with the selection of the main symptoms and syndromes of the disease.
2. Carrying out of researches of function of external respiration at indicative patients, processing of the received data and the report at employment
3. X-ray analysis, instrumental part in the research on the respiratory system - kazovyh patients with data processing and presentation in class
4. Carrying out of physical and instrumental inspection of the demonstrative patient with preparation of the review of scientific literature concerning the investigated case
5. Work with the literature and other sources of information and preparation of an abstract report on modern methods of examination of patients in the clinic of internal medicine
6. Work with the literature and other sources of information and preparation of the abstract report on features of syndromic diagnostics of a disease with a typical course, chosen at the request of the student

Tasks for independent work

The basic list of types of independent work of students, developed in accordance with the structure of the discipline, is presented in the section "Independent work". Mandatory type of independent work of students is the supervision of patients and writing a detailed medical history, which is provided in the study of the relevant tasks for independent work are:

1. C posterezhennya of patients (questioning, physical examination, evaluation of instrumental and laboratory examinations) of t uberkuloz th intrathoracic lymph nodes. with writing a medical history and presenting a clinical case in practice
2. Observation of a patient (questioning, physical examination, evaluation of the results of instrumental and laboratory examinations) with disseminated pulmonary tuberculosis with writing a medical history and presenting a clinical case in practice
3. Surveillance of a patient (questioning, physical examination, evaluation of the results of instrumental and laboratory examinations) with miliary pulmonary tuberculosis with writing a medical history and presenting a clinical case in practice
4. Observation of a patient (questioning, physical examination, evaluation of the results of instrumental and laboratory examinations) with tuberculosis of the nervous system and meninges with writing a medical history and presenting a clinical case in practice
5. Observation of a patient (questioning, physical examination, evaluation of the results of instrumental and laboratory examinations) with focal and infiltrative pulmonary tuberculosis with writing a medical history and presenting a clinical case in practice
6. Weekly observation of a patient (questioning, physical examination, evaluation of the results of instrumental and laboratory examinations) with caseous pneumonia with writing a medical history and presenting a clinical case in practice

The student independently chooses the disease for which he will conduct curation (questioning, examination) of the patient.

Typical test problems to be solved in practical classes:

1. After the examination, the secondary school teacher was diagnosed with pulmonary tuberculosis. For what maximum period can he be issued a certificate of incapacity for work?

A. For 10 months
B. 5 months
C. 4 months
D. 2 months
E. 1 mis yats and

2. A 52-year-old patient suffering from disseminated pulmonary tuberculosis was brought to the hospital with complaints of sharp pain in the right half of the chest, which appeared when climbing to the 3rd floor, cough, shortness of breath at rest, severe cyanosis. What complication should you think about first?

A. Spontaneous pneumothorax

B. Heart failure

C. Pulmonary insufficiency

D. Pleurisy

E. Acute myocardial infarction

3. A 20-year-old patient complains of severe headache, double vision, general weakness, fever, irritability. Objectively: body temperature 38 , 1 $^{\circ}C$, reluctant to come into contact, painfully reacts to stimuli. Ptosis of the left eyelid, divergent strabismus, anisocoria S> D. Expressed meningeal syndrome. At the lumbar puncture, the cerebrospinal fluid leaked under a pressure of 300 mm Hg, transparent, with slight opalescence, and a fibrinous film fell out a day later. Protein - 1.4 g / l, lymphocytes - 600/3 in mm ^{3}, sugar - 0.3 mmol / l. What preliminary diagnosis should be given to the patient?

A. Tuberculous meningitis

B. Meningococcal meningitis

C. Armstrong's lymphocytic meningitis

D. Syphilitic meningitis

E. Mumps meningitis

4. On the radiograph of the lungs is determined by the compaction and sharp decrease of the upper lobe of the right lung. The middle and lower lobes of the right lung are sharply pneumotized. The root of the right lung is pulled up to the compacted lobe. In the upper and middle sections of the left pulmonary field, multiple focal shadows. In the basal section of the left pulmonary field, 2 adjacent annular shadows with rather thick and uneven walls are clearly contoured. What disease does this radiological picture correspond to?

A. Fibrous-cavernous pulmonary tuberculosis

B. Atelectasis of the upper lobe of the right lung

C. Pneumonia with abscess

D. Peripheral cancer

E. Penkosta cancer

4. 4. Ensuring the educational process

1. Multimedia projectors, computers, screens for multimedia presentations, lecture presentations.

2. Demonstration screens, laptops, PowerPoint and Word files with "Step-2" tasks for practical and final classes.

3. Exam tickets.

When studying the discipline, all kinds of teaching methods recommended for high school are used, namely:

- by sources of knowledge: verbal (explanation, lecture, conversation, discussion); visual (demonstration); practical (practical work, mastering practical skills), on which special emphasis is placed on the study of the discipline;

- by the logic of the educational process: analytical (selection of individual symptoms of the disease), synthetic (clarification of the relationship of symptoms and selection of disease syndromes), their combination - analytical-synthetic, as well as inductive method (mainly in the study of block 1), deductive study of block 2) , their combination - a translational method (in the study of both modules);

- by the level of independent mental activity: problem, partial-search, research.

Combining and generalizing the above teaching methods, when studying the discipline it is advisable to implement such methods of organizing classes as:

- method of clinical cases,
- problem-research method,
- method of individual educational and research tasks,
- method of competitive groups,
- method of training technologies,
- method of conducting scientific conferences with the use of interactive, interdisciplinary and information and computer technologies

Types of student educational activities, according to the Model Curriculum, are lectures, practical classes, independent work of students.

Lecture and practical stages of students' learning are formed in such a sequence, if possible, that the topics of lectures precede practical classes.

Practical classes consist of four structural parts:

1) mastering the theoretical part of the topic,

2) demonstration by the teacher of methods of research of the thematic patient,

3) the work of students to practice practical skills at the patient's bedside under the supervision of a teacher,

4) solving situational problems and test-control of mastering the material.

When conducting practical classes, the main place is occupied by mastering practical skills in physical examination of the patient and working directly with patients.

On the basis of mastering clinical methods of examination of the patient, the ability to synthesize and interpret, evaluate and analyze them, the student develops clinical thinking and skills of establishing a syndrome diagnosis, which is the main task of the discipline.

Independent work of students occupies an important place in the study of the discipline. In addition to traditional pre-classroom training on theoretical issues of propaedeutics of internal medicine, it includes student work in therapeutic departments, clinical laboratories and functional diagnostics departments in extracurricular activities, the effectiveness of which should be ensured by teachers and support staff of propaedeutics of internal medicine. **Independent work includes curation of patients with writing a medical history, which involves questioning and complete physical examination of the patient to determine the leading syndromes, the appointment of diagnostic manipulations and participation in the algorithm of medical care for this patient.**

5. Final control

List of questions of final control (differential test)

List of questions for mastering BLOCK № 1:
" GENERAL APPROACHES TO THE DIAGNOSIS, TREATMENT AND PREVENTION OF TUBERCULOSIS ":

1. Epidemiology of tuberculosis. Sources and ways of transmission of tuberculosis infection. Infection, morbidity, morbidity and mortality from tuberculosis. Prevalence of tuberculosis in countries with different levels of economic development.

2. Properties of the pathogen of tuberculosis. Types of MBT, forms of variability (persistence, reversion). Resistance of the Office to anti-TB drugs. Sustainability of the Office in the environment.

3. Infection with tuberculosis, ways of penetration and spread of mycobacteria in the human body. Local and general reactions of an organism to a tuberculosis infection. Morphological reactions in tuberculous inflammation. The structure of tuberculous granuloma.

4. Anti-tuberculosis immunity and natural resistance to tuberculosis, their mechanisms. Tuberculin diagnosis. Differential diagnosis of post-vaccination and infectious immunity.

5. Methods of tuberculosis detection. Preventive fluorographic examination of the population. Examination of sputum.

6. Options for tactical actions for institutions of the general network in the detection of tuberculosis, depending on the results of bacterioscopic and fluorographic examination.

7. Tuberculosis prevention: social, infection control, (vaccination and revaccination of BCG SSI : indications, methods), secondary (chemoprophylaxis: indications, methods).

8. Sanitary prevention of tuberculosis. A set of preventive measures carried out in the center of tuberculosis infection. Work in the center of tuberculosis infection on prevention and early detection of tuberculosis.

List of questions for mastering BLOCK № 2 :

" PRIMARY AND SECONDARY FORMS OF TUBERCULOSIS. DIAGNOSIS, TREATMENT AND PREVENTION. "

1. Primary tuberculosis in adults. Clinical and radiological forms, diagnosis, differential diagnosis with nonspecific pneumonia, tumors, lymph node lesions in the roots of the lungs.

2 . Disseminated pulmonary tuberculosis. Clinical forms. Differential diagnosis with sarcoidosis, pneumoconiosis, collagenosis, mycosis, disseminated lung cancer. Treatment of disseminated tuberculosis. Consequences.

3. Focal pulmonary tuberculosis. Clinical options, diagnosis, treatment. Methods for determining the activity of tuberculosis foci. Differential diagnosis with limited pneumosclerosis, early stages of lung cancer, bronchopneumonia . Treatment of focal tuberculosis. Consequences.

4. Infiltrative pulmonary tuberculosis. Clinical and radiological variants of infiltrates. Differential diagnosis with influenza, pneumonia, eosinophilic infiltrate, peripheral lung cancer, sarcoidosis, atelectasis. Consequences. Forecast.

5. Caseous pneumonia. Clinic, diagnosis, differential diagnosis with nonspecific pneumonia, pulmonary infarction. Features of treatment. Consequences.

14. Pulmonary tuberculoma. Clinical and radiological variants of tuberculoma. Differential diagnosis of tuberculoma with peripheral cancer, benign tumors, aspergilloma of the lungs. Treatment and consequences depending on the size of the tuberculoma and the phase of the specific process. Consequences.

15. Fibrous-cavernous pulmonary tuberculosis. Reasons for the formation of caverns. Clinical and radiological characteristics, differential diagnosis with chronic abscess, polycystic lung disease, peripheral cancer with decay and cavity formation. Treatment of fibrocavernous pulmonary tuberculosis.

16. Cirrhotic pulmonary tuberculosis. The main clinical syndromes, radiological signs. Differential diagnosis of cirrhotic pulmonary tuberculosis with bronchiectasis, nonspecific pneumosclerosis, atelectasis. Features of treatment. Consequences.

17. Tuberculous pleurisy (including empyema). Classification. Clinical, radiological and cytological diagnosis, indications for puncture of the pleural cavity and methods of its implementation. Differential diagnosis of pleurisy in pneumonia, malignant and systemic diseases. Features of treatment. Consequences.

18. Miliary tuberculosis. Options for the clinical course. Diagnosis, treatment. Differential diagnosis with typhoid fever, sepsis, miliary carcinomatosis.

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20. Tuberculosis in patients with HIV / AIDS.

21. Complications of pulmonary tuberculosis. Pathogenesis, diagnosis and principles of treatment of hemoptysis, pulmonary hemorrhage, spontaneous pneumothorax, Emergency care for complications of pulmonary tuberculosis (pulmonary hemorrhage, spontaneous pneumothorax).

22. Principles and methods of treatment of patients with tuberculosis. Modes of antimycobacterial therapy depending on the category of treatment of the patient., Pathogenetic and symptomatic therapy. Surgical methods and spa treatment.

23. Anti-tuberculosis institutions. Tasks of the tuberculosis dispensary. Categories of dispensary observation of patients with tuberculosis. Work in the center of tuberculosis infection on prevention and early detection of tuberculosis.

Sets of practical tasks are formed directly from the list of practical skills that the student must master while studying each of the two modules of the discipline, which are standardized by the method of practical work.

The list of practical skills that the student must learn when studying block 1:

1. To interrogate a patient with tuberculosis . Make a conclusion about the obtained anamnestic data. Identify the main symptoms and syndromes.
2. Conduct a general examination of a tuberculosis patient. Identify the leading symptoms.
3. Examine the head and neck of a demonstrative patient. Determine the clinical significance of symptoms.
4. Examine the torso and limbs of the patient. Determine the clinical significance of symptoms.
5. Examine the chest of a patient with broncho-pulmonary pathology, assess static and dynamic signs.
6. Examine the atrial area, determine the clinical significance of symptoms.
7. Examine the abdomen, determine the clinical significance of symptoms.
8. Conduct a palpation of the chest to determine the clinical significance of symptoms.
9. Conduct a palpation of the lymph nodes, evaluate the results.
10. Carry out a comparative percussion of the lungs and determine the clinical significance of symptoms.

11. Carry out topographic percussion of the lungs and determine the diagnostic value of symptoms.

The list of practical skills that a student must learn when studying block № 2:

1. Identification in families of persons at increased risk of tuberculosis.
2. Explain the importance of bacterioscopic and bacteriological methods of sputum research.
3. Organization and collection of sputum for bacteriological research.
4. To plan the scheme of examination of a patient with tuberculosis, to analyze the obtained data and to determine the treatment regimens of patients with different clinical forms of tuberculosis.
5. Conducting and evaluating the results of the Mantoux tuberculin test with 2 TO, differential diagnosis of post-vaccination and infectious allergies.
6. Identify clinical forms of tuberculosis and formulate a clinical diagnosis according to the classification.
7. Explain the basic principles of treatment of patients with tuberculosis and determine the criteria for their treatment.
8. Use the principles of medical examination of persons at risk of tuberculosis and the principles of tuberculosis prevention.
9. Organize BCG vaccination for children who have not been vaccinated in the maternity hospital.
10. To monitor the development after the vaccine reaction.
11. Diagnose and provide emergency care in emergencies: spontaneous pneumothorax, hemoptysis and pulmonary hemorrhage.
12. Together with a phthisiologist and an epidemiologist to carry out anti-epidemic measures in the family of a patient-bactericidal.

"0" version of the ticket for the differential test

Petro Mohyla Black Sea National University

Educational qualification level - master

Field of knowledge: 22 Health care

specialty 222 Medicine

Academic discipline - **Tuberculosis**

Option № 0

1. Epidemiology of tuberculosis. Sources and ways of transmission of tuberculosis infection. Infection, morbidity, morbidity and mortality from tuberculosis. The prevalence of tuberculosis in countries with different levels of economic development **- the maximum number of points - 20.**
2. Caseous pneumonia. Clinic, diagnosis, differential diagnosis with nonspecific pneumonia, pulmonary infarction. Features of treatment. Consequences . **- maximum number of points - 20.**
3. **Practical skill: the** algorithm of the Mantoux test. **- maximum number of points - 20.**
4. **Situational task** : A 20-year-old patient complains of severe headache, double vision, general weakness, fever, irritability. Objectively: body temperature 38 , 1 $^{\circ}C$, reluctant to come into contact, painfully reacts to stimuli. Ptosis of the left eyelid, divergent strabismus, anisocoria S> D. Expressed meningeal syndrome. At the lumbar puncture, the cerebrospinal fluid leaked under a pressure of 300 mm Hg, transparent, with slight opalescence, and a fibrinous film fell out a day later. Protein - 1.4 g / l, lymphocytes - 600/3 in mm ^{3}, sugar - 0.3 mmol / l. Preliminary diagnosis? With what diseases it is necessary to carry out differential diagnosis. What is the treatment for this disease? **- maximum number of points - 20.**

Adopted by the department " tera pevtychnyh and surgical disciplines," Protocol № ___ from "__" _____ 2020

Head of the Department Professor Zak M.Yu.

Examiner Professor Zak M.Yu.

An example of the final control work on block 1

Solving problems Step-2

1. A patient who is being treated for infiltrative pulmonary tuberculosis has a sleep disorder, depression, polyneuritis. This is due to the reception:

A. Rifampicin

B. Pyrazinamide

S. Ethionamide

D. Streptomycin

E. Isoniazid

2. The patient was first diagnosed with focal pulmonary tuberculosis in the phase of infiltration and disintegration of the Office (-). To which category of patients according to WHO recommendations does it belong?

A. To I

B. To II

C. To III

D. To IV

E. None of the above

3. Isoniazid is included in the complex therapy of a patient with tuberculosis. Which method of drug administration will create the highest bactericidal concentration?

A. Oral

B. Endolumbar

C. Intravenous

D. Endopleural

E. Intramuscular

4. A patient who was admitted to the hospital for treatment is prescribed complex chemotherapy. What is the absolute contraindication to the appointment of streptomycin?

A. Diabetes mellitus

B. Hepatitis

C. Hypertensive disease

D. Pyelonephritis

E. Lesions of the VII pair of cranial nerves

5. A 9-year-old child was admitted to the children's ward of the tuberculosis hospital with a diagnosis of “Tuberculosis of intrathoracic lymph nodes in the infiltration phase”. In the anamnesis of tubocontact. What chemotherapy should be prescribed to the child?

A. Isoniazid + ethambutol + PAS + streptomycin

B. Isonifazide + streptomycin + Tibon + ethambutol

C. Rifampicin + PAS + isoniazid + ethambutol

D. Ftivazid + Tibon + Kanamycin

E. Isoniazid + rifampicin + pyrazinamide + ethambutol

6. A 25-year-old patient was admitted to an anti-tuberculosis hospital for disseminated pulmonary tuberculosis. He was assigned a standard treatment regimen for category I. The patient's weight is 60 kg. What is the average daily dose of isoniazid that a patient should take?

A. 0.1 g

B. 1.5 g

C. 1.0 g

D. 0.6 g

E. 0.3 g

7. Patient K., 42 years old, suffers from fibrocavernous tuberculosis in combination with alcoholism, chronic hepatitis. Which drug has a pronounced hepatotoxic side effect?

A. Isoniazid.

B. Streptomycin

S. Rifampicin

D. Ethambutol

E. PASK

8. A patient with infiltrative pulmonary tuberculosis is prescribed 5 anti-tuberculosis drugs. Which of the following drugs has a side effect on the optic nerve?

A. Pyrazinamide

B. Rifampicin

S. Ethambutol

D. Streptomycin

E. Isoniazid

9. Patient, 32 years old. He was admitted to the TB dispensary with complaints of periodic increase in body temperature to 37.0 ° C, weakness. After X-ray and laboratory tests, the diagnosis was made: VDTB (15.02.2005) of the upper lobe of the right lung (focal, infiltration phase), Destr-, MBT-M-K- ResistOResistII0, GISTO, Kat3Kog4 (2005). What treatment regimen should be prescribed to the patient?

A. HRZE

B. HZES

C. RZEEt

D. HRZ

E. ZESPt

10. A 28-year-old patient was admitted to the TB dispensary with complaints of weakness, fever up to 38.0 ° C, cough with sputum, weight loss. Radiologically: in the upper lobe of the right lung infiltrative changes with the presence of destruction, foci of contamination in S 1,2 of the right and S 6 of the left lung are defined. In the analysis of sputum MBT +. What treatment regimen should be prescribed to a patient in the intensive phase?

A. HRZPt

B. HRZS

C. RZEEt

D. HRZ

E. ZESPt

And so 30 problems with the subsequent analysis of typical errors.

An example of the final control work on block 2

Solving problems Step-2

1. The child had contact with a father with destructive pulmonary tuberculosis. Examination at the tuberculosis dispensary revealed a bend in the tuberculin test - an infiltrate 15 mm in diameter. Probable route of infection?

A. Contact
B. Aerogenic
S. Sexual
D. Alimentary
E. Transplacental

2. A 7-year-old child contracted the primary form of tuberculosis. Which of these forms belongs to the primary according to the clinical classification?

A. Focal tuberculosis
B. Primary tuberculosis complex
S. Pulmonary tuberculoma
D. Infiltrative tuberculosis
E. Caseous premonium

3. The patient after a 6-month course of treatment in the hospital was discharged with the diagnosis: "Focal tuberculosis of the upper lobe on the right in the phase of resorption and calcification. Office (-) "Which bacterial subpopulations of the Office predominate in the remaining foci?

A. Actively - reproducing.
B. Slowly metabolizing.
C. Persistent L-forms.
D. Alpha forms.
E. Ultra-small shapes.

4. The patient, 30 years old, fluorographically in the second segment of the right lung revealed a rounded shadow up to 5 cm in diameter, medium intensity with clear smooth contours and crescent-shaped illumination. In the surrounding lung tissue and in the lower lobe on the right, single low-

intensity focal shadows are identified. MBT was detected in the sputum. The diagnosis of tuberculoma. What is the phase of the process?

A. Resorption

B. Infiltration

C. Seals

D. Decay and contamination

E. Scarring

5. The patient, 25 years old, complains of general weakness, low-grade fever, hemoptysis. At percussion dulling of a percussion sound on a top of the right lung. Auscultatory - right at the apex on the background of weakened vesicular respiration, single small-bubble rales. Radiologically, on the right from the apex to the second rib there is a non-intensive inhomogeneous darkening due to drains and infiltration, against the background of which at the level of the 1st rib the focus of clarification is 1.5x1.5 cm in diameter. Diagnostically infiltrative tuberculosis of the upper lobe of the right lung. Through which phases did the specific process progress?

A. Disintegration and hematogenous dissemination

B. Disintegration and infiltration

C. Disintegration and bronchogenic dissemination

D. Disintegration and lymphogenic dissemination

E. Disintegration and lymphohematogenous dissemination

6. A 32-year-old patient was diagnosed with pulmonary tuberculosis. Radiologically: in the 2nd segment of the right lung the site of obscuration of 3,5 cm in the diameter, small intensity, with indistinct, equal contours and enlightenment in the center is defined. The defining phase of the process.

A. Seals

B. Disintegration

C. Infiltration

D. Scarring

E. Insemination

7. Patient, 34 years old. According to clinical and radiological data, the diagnosis was made: VDTB (21.01.2004) of the upper lobe of the right lung (infiltrative), Destr +, MBT + MK + Rezist-GISTO, Kat1Kog1 (2004). Which phase corresponds to the abbreviation Destr +?

A. Infiltration

B. Insemination

C. Seals

D. Disintegration

E. Resorption

8. The patient is 40 years old. He is being treated at the anti-tuberculosis dispensary with a diagnosis of HTB (15.02.2000) of the upper lobes of both lungs (fibro-cavernous, infiltration and contamination phase), Destr +, MBT + M + K + Rezist-Rezis110, GISTO, Kat4Ko. X-rays of the patient are determined by the decay cavities (in the upper lobes of the lungs), multiple fresh foci in both lungs, fibrous deformation of the pulmonary pattern. What phase of the tuberculosis process corresponds to the presence of multiple fresh foci?

A. Phases of decay

B. Sealing phase

C. Phases of calcification

D. Insemination phase

E. Phases of infiltration

9. The patient. 38 years old. Complains of fever up to 37.2ºC, weakness, sweating, cough with sputum. Radiographically in S1,2,3 of the right lung the infiltrative shadow with a decay cavity and the centers of contamination in S6 of a healthy lung is defined. Mycobacteria of tuberculosis were found in sputum. The patient was diagnosed with tuberculosis. Which diagnosis fully corresponds to the classification?

A. VDTB (12.01.2005) of the upper lobe of the right lung (infiltrative), Destr +, MBT + M + K + HISTO, Cat1Cog1 (2005)

B. VDTB (12.01.2005) of the upper lobe of the right lung (infiltrative), Destr +, MBT + M + K + Resist0 Resist110, HISTO, Cat1Cog1 (2005)

S. VDTB (12.01.2005) (infiltrative), Office + M + K + HISTO, Kat1Kog1 (2005)

D. VDTB (12.01.2005) of the upper lobe of the right lung (infiltrative), Office + M + K + Resist + Resist110, HISTO, Cat1Cog1 (2005)

E. VDTB (12.01.2005) of the upper lobe of the right lung (infiltrative), Destr +, Resist0 Resist110, HISTO

10. Patient, 30 years old. Admitted to the TB dispensary in connection with the changes detected on the fluorogram: in S 1 of the right lung there is a shadow up to 1 cm in diameter, low intensity with blurred contours. On the tomogram in the center of a shadow destruction is defined. In the analysis of sputum MBT + (bacteriological). The patient was diagnosed with focal pulmonary tuberculosis. What phases of focal tuberculosis correspond to the changes detected on the radiograph?

A. Infiltrations and contamination

B. Infiltration and decay

C. Absorption and scarring

D. Decay and contamination

E. Sealing and resorption

And so 30 problems with the subsequent analysis of typical errors.

6. Evaluation criteria and tools for diagnosing learning outcomes

TEACHING METHODS

a) lectures, b) practical classes, c) independent work of students, d) consultations.

Thematic plans of lectures, practical classes and VTS reveal the problematic issues of the relevant sections of internal medicine. Didactic tools (multimedia presentations, slides, educational films, demonstration of thematic patients) are used as much as possible in the lecture course . Lecture and practical stages of students' learning are composed mainly in such a way that lectures or preceded by appropriate practical classes, and when rotating thematic sections, are read in one block.

Practical classes are held on the clinical base of the department. Methods of organizing practical classes in internal medicine requires:

- to make the student a participant in the process of providing medical care to patients from the moment of their hospitalization, examination, diagnosis, treatment to discharge from the hospital;

- to master professional practical skills; skills of teamwork of students, doctors, other participants in the process of providing medical care;

- to form in the student, as in the future specialist, an understanding of responsibility for the level of their training, its improvement during training and professional activity.

To implement this, it is necessary at the first lesson of the relevant section to provide the student with a detailed plan of work in the clinic and provide conditions for its implementation. This plan should include:

- research that the student must master (or get acquainted with);

- algorithms (protocols) of examinations, diagnosis, treatment, prevention in accordance with the standards of evidence-based medicine;

- supervision of patients to be carried out by the student during the cycle;

- reports of the patient's medical history in the study group, at clinical rounds, practical conferences.

Patient supervision involves:

1) clarification of the patient's complaints, medical history and life, conducting a survey of organs and systems;

2) conducting a physical examination of the patient and determining the main symptoms of the disease;

3) analysis of laboratory and instrumental examination data;

4) formulation of the diagnosis;

5) appointment of treatment;

6) determination of primary and secondary prevention measures;

7) report on the results of examination of the patient by a team of students in the study group, analysis under the guidance of the teacher of the correctness of diagnosis, differential diagnosis, scheduled examination, treatment tactics, assessment of prognosis and performance, prevention.

In practical classes, students are encouraged to keep protocols in which it is necessary to enter brief information about the patients examined during the practical lesson, diagnosis, examination plan and prescribed treatment.

VTS and individual work of students is 30-56% in the curriculum. It includes:

- ✓ pre-classroom and extracurricular training of students on the course of the discipline;
- ✓ work of students in departments on the clinical base of the department, including laboratories and departments (offices) of functional diagnostics, interpretation of data of laboratory and instrumental research methods in internal pathology in extracurricular time;
- ✓ acquisition of practical skills through work with patients;
- ✓ individual VTS (speech at the scientific-practical conference of the clinic, writing articles, report of the abstract in a practical lesson, participation in the work of the student group, competitions in the discipline, etc.);
- ✓ work in a computer class in preparation for the Step-2 exam;
- ✓ elaboration of topics that are not included in the classroom plan.

Teachers of the department provide the opportunity to perform VTS. During practical classes and monitor and evaluate its implementation. Topics submitted for self-study are evaluated during the final control.

METHODS OF CONTROL

It is recommended to conduct practical classes with the inclusion of:

1) control of the initial level of knowledge with the help of tests;

2) survey of students on the topic of the lesson;

3) management of 1-2 patients with diseases and conditions corresponding to the subject of the lesson, followed by discussion of the correctness of diagnosis, differential diagnosis and treatment with the use of evidence-based medicine and in accordance with National and European guidelines and protocols;

4) consideration of the results of additional research methods (laboratory and instrumental), which are used in the diagnosis and differential diagnosis, consideration of which is provided by the topic of practical training;

5) control of the final level of knowledge on the test tasks made in the format of Step-2.

Assimilation of the topic (current control) is controlled in a practical lesson in accordance with specific goals, assimilation of semantic sections - in practical final lessons. It is recommended to use the following tools to assess the level of preparation of students: computer tests, solving situational problems, conducting laboratory research and interpretation and evaluation of their results, analysis and evaluation of instrumental research and parameters characterizing the human body, control of practical skills.

The current control is carried out by the teacher of the academic group after the students have mastered each topic of the discipline and grades are set using a 200-point scale of the university, which corresponds to the 200-point scale of ECTS.

The final lesson (SO) is conducted after the logically completed part of the discipline, consisting of a set of educational elements of the work program, which combines all types of training (theoretical, practical, etc.), elements of educational and professional program (academic discipline, all types of practices). certification), which are implemented by appropriate forms of the educational process. The department provides information for preparation for the software on the information stand and on the website of the department the following materials:

- basic and anchor test tasks LII "Step-2";
- list of theoretical questions (including questions on independent work);
- list of practical skills;
- a list of drugs, prescriptions of which must be prescribed by the student;
- list of medical records;
- criteria for assessing the knowledge and skills of students;
- schedule of students completing missed classes during the semester.

P rovedennya final control:

1. Solving a package of test tasks on the content of educational material, which includes the following:

- basic test tasks in the discipline, which cover the content of the educational material of the final lesson in the amount of **30 tests** that correspond to the database "Step-2" . Evaluation criterion **- 70, 0 % of** correctly solved tasks; "Passed" or "did not pass";

2. Assessment of the development of practical skills (assessment criteria - "performed" or "failed").

3. During the assessment of the student's knowledge on theoretical issues, as well as questions for independent work, which are included in this final control, the student is given a grade on a multi-point scale, as well as a grade on IPA.

4. Tasks for practical and professional training that reflect the skills and abilities during the supervision of thematic patients, evaluation of the results of laboratory and instrumental research methods and the choice of treatment tactics, which are defined in the list of work program of the discipline.

5. Tasks for diagnosis and care in emergencies.

The final lesson is accepted by the teacher of the academic group . Forms of software should be standardized and include control of all types of training (theoretical, practical, independent, etc.), solving test tasks "Step-2", provided by the work program of the discipline . At the beginning of the lesson students solve test tasks "Step-2" in the amount of 30 tasks, then at the patient's bedside the teacher of the group takes practical skills, which are assessed "performed", "failed", then students write written work, each ticket contains 5 theoretical questions, which include questions made for independent work, then an oral interview with the student, followed by a grade for the software.

Assessment of individual student tasks. The meeting of the department approved a list of individual tasks (participation with reports in student conferences, profile competitions, preparation of analytical reviews with presentations with plagiarism) and determined the number of points for their implementation, which can be added as incentives (**not more than 10).** Points for individual tasks are accrued to the student only once as a commission (commission - head of the department, head teacher, group teacher) only if they are successfully completed and defended. In no case may the total amount of points for IPA exceed 120 points.

Assessment of students' independent work. Assimilation of topics that are submitted only for independent work is checked during the final control and differential test.

In order to assess the learning outcomes of the discipline, the **final control** is carried out **in the form of a differential test.** Only students who have all the topics of the classes and the final control are admitted to the test .

Zalikz discipline " F tyziatriya" - a process during which tested received 5 rate:

- level of theoretical knowledge;
- development of creative thinking;
- skills of independent work;

- competencies - the ability to synthesize the acquired knowledge and apply them in solving practical problems.

The department provides the following materials for preparation for the exam on the information stand and on the website of the department:

- basic and anchor test tasks "Step";
- list of theoretical questions (including questions on independent work);
- list of practical skills;
- a list of drugs, prescriptions of which must be prescribed by the student;
- criteria for assessing the knowledge and skills of students;
- schedule of students completing missed classes during the semester.

Offset.

1. Assessment of theoretical knowledge on the tickets drawn up at the department, which contain two theoretical questions from the sections of the discipline, which were studied during the academic year.

2. Assessment of practical skills acquisition .

3. Evaluation of the solution of the situational problem.

Distribution of points in the assessment - see above in the example of the test ticket. The maximum score on the test is 80 points, the test is considered passed if at least 50 points are scored (see the table below).

Distribution of points received by students

As mentioned above, a 200-point scale is used in the evaluation.

From phthisiology 15 practical classes (30 academic hours).

For practical classes, the maximum amount of points is 120, the minimum - 70.

Accordingly, the **maximum score for each practical lesson** is: 120 points: 15 lessons = **8 points. The minimum score** is 70 points: 15 classes = **4.7 points.**

A score lower than 4.7 points means "unsatisfactory", the lesson is not credited and must be practiced in the prescribed manner.

On the differential test, the maximum positive score is 80 points, the minimum - 50.

Assessment of student performance

Type of activity (task)	**Maximum number of points**
Practical classes from 1 to 15	8 points in each lesson
Together for 15 practical classes	120
Differential credit	80
Together for practical classes and credit	200

Criteria for assessing knowledge

A **student's answer is evaluated** with a score of 8 points in the practical lesson and 71-80 points in the test (A on the ECTS scale and 5 on the national scale) **if it demonstrates deep knowledge of all theoretical principles and ability to apply theoretical material for practical analysis and has no inaccuracies.**

With a score of 6-7 points in the practical lesson and 61-70 points in the test (B and C on the ECTS scale and 4 on the national scale) the **answer is evaluated if it shows knowledge of all theoretical principles, ability to apply them in practice, but some fundamental inaccuracies are allowed.**

With a score of 4.7 points in the practical lesson and 50-60 points in the test (D and E on the ECTS scale and 3 on the national scale) **the student's answer is evaluated provided that he knows the main theoretical principles and can use them in practice.**

7. RECOMMENDED LITERATURE

7.1. Basic literature

1. Tuberculosis: nat. near. / VI Petrenko, LD Todoriko, LA Grishchuk and others; for order. VI Petrenko. - K.: BCB «Медицина», 2015.

2. Asmolov OK, Baburina OA, Gerasimova NA Practical training in tuberculosis, 2010, textbook. - with. 46 (e-book).

3.. PetrenkoV . I .. Phtisiology - textbook. - K._ Медицина, 2018. - 288 c. (eBook).

7.2. Additional literature

1. Feshchenko YI Reorganization, restructuring and reform of the anti-tuberculosis service in Ukraine: Monograph / Yu.I. Фещенко, B.M. Мельник, M.C. Опанасенко; F.G. National Institute of Tuberculosis and Pulmonology Janowski. - Kyiv: Lira-K, 2015. - 171p: ill., Table.

2.Petrenko VI Tuberculosis: a textbook / VI Petrenko. - K.: Медицина, 2008. - 487 c.

3..Tuberculosis prevention: textbook / VI Petrenko, MG Dolynska, AV Alexandrin, VV Petrenko - K .: LLC "Ridge", 2017. - 88 p.

4. Order of the Ministry of Health of Ukraine № 620 “Unified clinical protocol of primary, secondary (specialized) and tertiary (highly specialized) medical care. Tuberculosis". - K.: Б. in, 2014.- 128 p.

5. Order of the Ministry of Health of Ukraine dated 16.08.2010 № 684 “On approval of the Standard of infectious control over tuberculosis in medical and preventive institutions, places of long-term stay of people and residence of patients with tuberculosis”

6. Order of the Ministry of Health of Ukraine № 1039 “ Unified clinical protocol of primary, secondary (specialized) and tertiary (highly specialized) medical care. Tuberculosis / HIV / AIDS ”dated 31.12.201 8 .

Information resources

1. https://www.aasld.org/
2. http : // www . acc . org / guidelines # sort =% 40 foriginalz 32 xpostedz 32 xdate 86069% 20 descending
3. https://www.asn-online.org/education/training/fellows/educational-resources.aspx#Guidelines
4. www.brit-thoracic.org.uk/standards-of-care/guidelines
5. https://cprguidelines.eu/
6. https: //www.diabetes. org
7. https : // www . escardio . org / Guidelines / Clinical - Practice - Guidelines
8. http://www.eagen.org/
9. http : // www . ers - education . org / guidelines . aspx
10. http://www.enp-era-edta.org/#/44/page/home
11. https : // www . eular . org / recommendations _ management . cfm
12. http://www.european-renal-best-practice.org
13. http://www.esmo.org/Guidelines/Haematological-Malignancies
14. https://ehaweb.org/organization/committees/swg-unit/scientific-working-groups/structure-and-guidelines/
15. http : // www . gastro . org / guidelines
16. www.ginasthma.org
17. http://goldcopd.org .
18. http://inephrology.kiev.ua/
19. http://www.ifp.kiev.ua/index_ukr.htm
20. http : // kdigo . org / home / guidelines /
21. http://mtd.dec.gov.ua/index.php/uk/
22. https://www.nice.org.uk
23. http://www.oxfordmedicaleducation.com/

24. http : // professional . heart . org / professional / GuidelinesStatements / UCM _316885_ Guidelines - Statements . jsp

25. https : // www . rheumatology . org / Practice - Quality / Clinical - Support / Clinical - Practice - Guidelines https : // www . thoracic . org / statements /

26. http://www.strazhesko.org.ua/advice

27. https://www.thyroid.org

28. https : // www . ueg . eu / guidelines /

29. http://ukrgastro.com.ua/

30. Website of the Center for Public Health of the Ministry of Health of Ukraine: http://phc.org.ua/

31. [Electronic resource]. - access mode https://www.cdc.gov/

32. Global AIDS Update [Electronic resource] / UNAIDS, 2016. - Access mode: http://www.unaids.org/sites/default/files/media_asset/global-AIDS-update2016_en.pdf