The Ministry of Health of Ukraine

Danylo Halytsky Lviv National Medical University

Department of Phthisiology and Pulmonology

"Approved"_____
The first vise-rector of scientific-
pedagogical work
Assoc. prof. I. SOLONYNKO_____
«_____»_____2023.

EXECUTABLE CODE OF EDUCATIONAL DISCIPLINE

OC 21. INFECTIOUS DISEASES WITH PHTHISIOLOGY AND EPIDEMIOLOGY

OC 21.2. PHTHISIOLOGY

training of specialists of the second (master) level of higher education
field of knowledge 22 "Health care"
specialty 221 "Dentistry"

Discussed and accepted on
meeting of Department
of phthisiology and pulmonology
Protocol № from _____2023
Chief of Department
_____Prof. Kostyk O.P.

Ratified
a methodical commission of
therapeutic disciplines
Protocol № ____from_____ 2023
Head of methodical commission
_____Prof. Radchenko O.M.

INTRODUCTION

Program of study of the discipline «Phthisiology»

according to the Standard of higher education of the second (master's) level

field of knowledge 22 «Health care»

specialty 221 «Dentistry»

educational program of master of dentistry

Annotation of the discipline «Phthisiology»

The educational program of «Phthisiology» is a mandatory component of the educational and professional training program for masters of Dentistry. Students study epidemiology, methods of timely detection and diagnosis, clinical and diagnostic signs of tuberculosis, basic principles of treatment of patients with tuberculosis, prevention of tuberculosis and infection control measures; improve the ability to interview and objectively examine the patient, interpret the data of laboratory and instrumental studies, formulate a clinical diagnosis, prescribe treatment.

Structure educational discipline	**Amount of credits, hours, from them**				**Year of study semester**	**Type of control**
	Total	Audience		S-Ws		
		Lectures	Practical occupations			
Module: Phthisiology Semantic modules 3	**1,5 credits** **ECTS / 45год.**	**4**	**18**	**23**	4th year (VIII semester)	**credit**

The subject of study of the academic discipline:

- epidemiology of tuberculosis, methods of timely detection and diagnosing of TB;
- clinical and diagnostic signs of tuberculosis;
- basic principles of treatment of tuberculous patients;
- prevention of tuberculosis and infection control measures.

Interdisciplinary connections. Phthisiology as an educational discipline:

- is based on students' study of anatomy, physiology, microbiology, pathophysiology, pathomorphology, pharmacology, propaedeutics of internal medicine, propaedeutics of pediatrics, hygiene and ecology and integrates with these disciplines;
- provides for the study of the relationship with the following disciplines: internal medicine, surgery, pediatrics, neurology, infectious diseases, oncology and the formation of abilities to apply knowledge of phthisiology in the process of further training and professional activity.

1. The aim and tasks of the educational discipline

1.1. *The aim of the discipline* «*Phthisiology*»is the acquisition of basic knowledge of phthisiology by students, mastering modern diagnostic methods, differential diagnosis,

treatment, prevention of tuberculosis, formation of the ability to use knowledge, professional skills and practical skills to solve various problems of professional activities of a dentist in the field of health care.

1.2. *The main tasks of studying the discipline* «*Phthisiology*»are:
- to identify the risk factors for tuberculosis;
- to interpret the results of of tuberculin tests, bacteriological methods of study of sputum;
- to identify the clinical forms of tuberculosis and formulate the clinical diagnosis according to the classification;
- to make the scheme of examination of a patient with tuberculosis, analyze the data obtained;
- to appoint standard treatment regimens for patients with respiratory tuberculosis;
- to determine the consequences of treatment of patients with respiratory tuberculosis.

1.3. *Competences and learning outcomes*, the formation of which is facilitated by the discipline (relationship with the normative content of training of higher education, formulated in terms of learning outcomes in the Standard of Higher Education).

The discipline ensures that students ***competencies*** according to the requirements of the Standard of Higher Education:

Integral competence - the ability to solve complex problems in the field of in the field of health care, specialty "Dentistry" in professional activities or in the process of training, involving research and innovation innovation and characterized by uncertainty of conditions and requirements.

-General:
GC1 – Ability to abstract thinking, analysis and synthesis.
GC2 – Knowledge and understanding of the subject area and understanding of professional activities
GC3 – Ability to apply knowledge in practical situations.
GC4 – Ability to communicate in English
GC5 - Skills in the use of information and communication technologies.
GC6 - Ability to search, study and analyze information from various sources.
GC7 - Ability to adapt and act in a new situation.
GC8 - Ability to identify, set and solve problems.
GC9 - Ability to be critical and self-critical.
GC10 – Ability to work in a team.
GC11 - The desire to preserve the environment.
GC12 - Ability to act socially responsibly and consciously.
GC13 - Ability to exercise their rights and responsibilities as a member of society, aware of priceness and the need for its sustainable development, the rule of law, human and civil rights and freedoms in Ukraine.
GC14 – Ability to preserve and multiply moral, cultural, scientific values and achievements based on an understanding of the history and patterns of development of the

subject area, its place in society and in the development of society, technology and technology, use different types and forms of motor activity for active rest and leading a healthy lifestyle.

-Special (professional, subject):
SC1 – Ability to collect medical information about the patient and analyze clinical data.
SC2 – Ability to determine the required list of laboratory and instrumental studies and evaluate their results.
SC3 – Ability to diagnose: determine the preliminary, clinical, final, concomitant diagnosis, emergency conditions.
SC4 – Ability to plan and carry out activities to prevent tuberculosis of organs and tissues of the oral cavity and maxillofacial area.
SC5 – Ability to design the process of providing medical care: to determine the approaches, plan, types and principles of treatment of tuberculosis of organs and tissues of the oral cavity and maxillofacial area.
SC6 – Ability to determine the rational mode of work, rest, diet in patients in the treatment of tuberculosis of organs and tissues of the oral cavity and maxillofacial area.
SC7 – Ability to determine the tactics of management of patients with tuberculosis of organs and tissues of the oral cavity and maxillofacial area with concomitant somatic diseases.
SC8 – Ability to perform medical and dental manipulations.
SC9 – Ability to treat tuberculosis of organs and tissues of the oral cavity and maxillofacial area.

Detailing of competencies in accordance with the NRK descriptors in the form of "Competencies Matrix".

Competences Matrix

N	**Competences**	**Knowledge**	**Skill**	**Communications**	**Autonomy and responsibility**
General competencies					
1.	Ability to abstract thinking, analysis and synthesis.	To know the ways of analysis and synthesis.	To be able to reason, arguments, generalize and fore conclusions.	To establish appropriate connections to achieve goals.	Be responsible for the combination of analysis and synthesis during the study of the subject.
2.	Ability to apply knowledge in practical activity.	To know the methods of implementing knowledge in practical activity.	Be able to use professional knowledge to practical activity.	To establish relations with subjects of practical activity.	Be responsible for validity decisions made
3.	Knowledge and understanding of the subject area and understanding of professional	To have in-depth knowledge of the structure of the subject area and professional	To be able to carry out professional activities that require	The ability to effectively form a communication strategy in professional	To be responsible for professional development, ability to

	activity	activity.	updating and integration of knowledge.	activity.	further professional training at a high level autonomy.
4.	Ability to communicate in English language.	To have basic knowledge of English language.	Be able to communicate in English language.	To use English language in a professional activity	To be responsible for the development of professional knowledge using English language.
5.	Skills in the use of information and communication technologies.	To have deep knowledge in the field of information and communication technologies used in professional activities.	To be able to use information and communication technologies in the professional field.	To use information and communication technologies in the professional field.	To be responsible for the development of professional knowledge and skills.
6.	Ability to search, process and analyze information from various sources.	Know the methods and methods of finding information from different sources.	Be able to search and analyze information from various sources.	Apply communication technologies in the search and analysis of information.	Be responsible for the ability to search and process information from various sources.
7.	Ability to adapt and act in a new situation.	To know the types and methods of adaptation, principles of action in new situation.	To be able to apply means of self-regulation, to be able to adapt to new situations of life and activity.	To establish appropriate connections for achievement result	To be responsible for the quality of professional performance tasks in a new situation.
8.	Ability to identify, set and solve problems.	Know the problematic issues of professional activity and ways to solve them.	Be able to timely identify and adequately solve problems in professional activities.	Effectively use communication strategy in solving problems in professional activities.	Be responsible for the timeliness of detection and adequacy of problem solving in professional activities.
9.	The ability to be critical and self-critical.	Know the approaches to the production of positive and constructive criticism and self-criticism.	Know the approaches to positive and constructive criticism and be able to identify and adequately	Use communication technology for positive and constructive criticism and self-criticism.	Bear responsibility for criticism and self-criticism in accordance with existing norms and

			assess the shortcomings and mistakes of someone's own work in order to eliminate them.		values.
10.	Ability to work in a team	To know communication tactics and strategies, laws and methods communicative behavior.	Be able to make a reasoned decision, choose methods and communication strategies to ensure effective teamwork.	To use communication strategies and skills interpersonal interaction.	Be responsible for the choice of method communication.
11.	The desire to preserve the environment.	Know state, social and international measures that ensure the rational use, restoration, enhancement and preservation of natural resources from destruction, pollution and depletion.	Be able to carry out environmental activities.	Communicate with administrative and legal authorities in matters of environmental protection.	Be responsible for the preservation of the environment..
12.	Ability to act socially responsibly and consciously.	Know your social and community rights and responsibilities.	To form their civic consciousness, to be able to act in accordance with it.	Ability to convey their social position.	Be responsible for their citizenship and activities.
13.	Ability to exercise their rights and responsibilities as a member of society, to realize values of civil (free democratic) society and the need for its sustainable development, rule of law, human and civil rights and freedoms in Ukraine.	Know your rights and responsibilities as a member of society.	Be able to exercise their rights and responsibilities as a member of society.	Understand the values of civil society.	Be personally responsible for the exercise of their rights and obligations.

14.	Ability to preserve and multiply moral, cultural, scientific values and the achievements of society on the basis of understanding the history and laws of the development of the subject area, its place in the general. a system of knowledge about nature and society and in the development of society, technology and technology, use different types and forms of motor activity for active rest and leading a healthy lifestyle.	Know the moral, cultural, scientific values and achievements of society, the basic rules of a healthy	Demonstrate socially responsible and conscious behavior, follow humanistic and democratic values in professional and social activities.	Promote moral, cultural, scientific values, leading a healthy lifestyle.	Take effective measures to maintain a healthy lifestyle and maintain health (personal and environment)
Special (professional, subject) competences					
1.	Ability to collect medical information about the patient and analyze clinical data.	To know the methods and standard schemes of the survey and physical examination of the patient.	Be able to collect patient complaints, history of illness and life, conduct a physical examination of the patient.	Effectively form a communication strategy when communicating with the patient and his relatives.	Be responsible for quality patient information collection based on survey, examination, palpation, percussion and auscultation.
2.	Ability to determine of results of laboratory and instrumental examinations.	To know the necessary laboratory and instrumental studies for the diagnosing of tuberculosis.	Be able to prescribe laboratory and instrumental examination by applying standard methods and analyze the results of laboratory and instrumental studies.	It is professional to inform the patient about the necessity of carrying out a certain list of laboratory and instrumental studies and about the results of these examinations.	Be responsible for making a decision about the choice research methods and for correct assessment of the results of laboratory and instrumental examinations.
3.	Ability to establish preliminary, clinical, final, concominant diagnoses,	To know the algoritm of diagnosing of tuberculosis; isolation of leading symptoms	On the basis of the conducted examination, be able to establish a diagnosis	Communicate with dentists and doctors of other specialties in order to correctly determine	Adhering to ethical and legal norms, bear responsibility for making

	emergency conditions.	or syndromes.	tuberculosis and formulate it according to clinical classification.	diagnoses.	informed decisions and actions regarding the correctness of establishing a diagnosis.
4.	Ability to plan and carry out activities to prevent tuberculosis of organs and tissues of the oral cavity and maxillofacial area.	Know the types of tuberculosis prevention (vaccination, BCG revaccination; chemoprevention; sanitary prevention).	To be able to carry out sanitary-hygienic and preventive measures aimed at preventing infection and disease with tuberculosis of the population.	Inform the population about the need for tuberculosis prevention.	Be responsible for timely and high-quality TB prevention.
5.	Ability to design the process of providing medical care: to determine the approaches, plan, types and principles of TB treatment.	Have specialized knowledge of algorithms and standard TB treatment regimens.	Be able to prescribe treatment to a patient with tuberculosis.	Inform the patient about the need for mandatory treatment of tuberculosis and strict compliance with all doctor's recommendations.	Be responsible for the timely appointment of adequate treatment of a patient with tuberculosis.
6.	Ability to determine the rational mode of work and rest, diet in patients in the treatment of tuberculosis.	Know the algorithms and standard schemes for determining the mode of work and rest, the selection of therapeutic nutrition for tuberculosis.	To be able to determine the rational mode of work and rest of patients with tuberculosis, to choose for them proper nutrition.	Form and convey to the patient and/or his relatives conclusions about the rational mode of work and rest, proper nutrition for tuberculosis.	Be responsible for the validity of the appointment of the regime of work and rest, diet for patients with tuberculosis.
7.	Ability to determine the tactics of management of patients with tuberculosis of organs and tissues of the oral cavity and maxillofacial area with concomitant tuberculosis of other organs.	Know the tactics of managing patients with tuberculosis of different localization.	Be able to prescribe treatment to a patient with tuberculosis of organs and tissues of the oral cavity and maxillofacial area with concomitant tuberculosis of other organs.	Inform patients with tuberculosis of organs and tissues of the oral cavity and maxillofacial area about the need for examination and treatment of concomitant tuberculosis of other organs.	Bear responsibility for the correct tactics of management of patients with tuberculosis of organs and tissues of the oral cavity and maxillofacial area with concomitant tuberculosis of other organs.
8.	Ability to perform	Have specialized	Be able to	It is justified to	Be responsible

	medical and dental manipulations.	knowledge of algorithms for performing medical manipulations.	perform medical manipulations.	form and convey to the patient and/or his relatives conclusions about the need for medical manipulations.	for the quality of medical manipulation.
9.	Ability to treat tuberculosis of organs and tissues of the oral cavity and maxillofacial area.	Know the algorithms and standard treatment regimens for tuberculosis of organs and tissues of the oral cavity and maxillofacial area.	Be able to treat a patient with tuberculosis of organs and tissues of the oral cavity and maxillofacial area.	Inform the patient about the need for mandatory treatment of tuberculosis of organs and tissues of the oral cavity and maxillofacial area and strict compliance with all doctor's recommendations.	Be responsible for the timely appointment of adequate treatment of the patient with tuberculosis of organs and tissues of the oral cavity and maxillofacial area.

Integrative learning outcomes, the formation of which contributes to the academic discipline "Phthisiology":

- to carry out professional activity in social interaction, which is based on humanistic and ethical principles;
- apply knowledge of general and professional disciplines in professional activities;
- comply with the norms of sanitary and hygienic regime and safety requirements during professional activities;
- use the results of independent search, analysis and synthesis of information from various sources to solve typical problems of professional activity;
- argue information for decision-making, be responsible for them in standard and non-standard professional situations;
- to carry out professional communication in the Ukrainian literary language, to use skills of oral communication in foreign languages, analyzing texts of a professional direction and to translate foreign language information sources;
- adhere to the norms of communication in professional interaction with colleagues, management, work effectively in a team;
- analyze the information obtained as a result of scientific research, summarize, systematize and use it in professional activities.

Program training results for the discipline "Phthisiology":

PTR-1. To identify the leading clinical symptoms and syndromes according to standard methods, using preliminary data of the patient's history, data of the patient's examination, knowledge about the person, his organs and systems, to establish a probable nosological or syndromic preliminary clinical diagnosis of dental disease.

PTR-2. Collect information on the general condition of the patient, evaluate the psychomotor and physical development of the patient, the condition of the maxillofacial organs, on the basis of the results of laboratory and instrumental examinations, evaluate

information on the diagnosis.

PTR-3. Assign and analyze additional (mandatory and optional) methods of examination (laboratory, functional and/or instrumental) of patients with diseases of organs and tissues of the oral cavity and maxillofacial area for differential diagnosis of diseases.

PTR-4. Determine the final clinical diagnosis following the relevant ethical and legal norms, by making an informed decision and logical analysis of the obtained subjective and objective data of the clinical, additional examination, differential diagnosis under the control of the physician-leader in the conditions of the health care institution.

PTR-6. Plan and implement measures to prevent tuberculosis of organs and tissues of the oral cavity and maxillofacial area among the population to prevent the spread of tuberculosis.

PTR-8. Determine the approach, plan and principles of treatment of tuberculosis of organs and tissues of the oral cavity and maxillofacial area by making an informed decision on existing algorithms and standard schemes.

PTR-9. Determine the nature of the mode of work, rest and the necessary diet in the treatment of tuberculosis of organs and tissues of the oral cavity and maxillofacial area on the basis of a preliminary or final clinical diagnosis by making an informed decision according to existing algorithms and standard schemes.

PTR-10. Determine the tactics of management of a dental patient with tuberculosis of different localization by making an informed decision according to existing algorithms and standard schemes.

PTR-17. Adhere to a healthy lifestyle, use the techniques of self-regulation and self-control.

PTR-18. To realize and be guided in their activities by civil rights, freedoms and obligations, to raise the general cultural level.

PTR-19. Comply with the requirements of ethics, bioethics and deontology in their professional activities.

PTR-20. Organize the necessary level of individual safety (own and persons cared for) in case of typical dangerous situations in the individual field of activity.

2. Information volume of the educational discipline

1,5 ECTS credits / 45 hours are assigned to the study of the academic discipline.

Semantic module 1. General issues of phthisiology. Method of examination of a patient with tuberculosis

Specific goals:

-to determine the risk factors for TB;

- to analyze the main epidemiological indicators of the prevalence of tuberculosis (infection, morbidity, mortality);
- to describe the features of the pathogens of tuberculosis;
- to identify ways to infect tuberculosis;
- to determine the categories of people at high risk of TB;
- to identify clinical signs of tuberculosis;
- to determine the role of bacterioscopic, bacteriological and molecular genetic methods for the study of sputum;

- to analyze the main X-ray syndromes in the tuberculous clinic;
- to determine the algorithm of the actions of the doctors of the institutions of the general medical network regarding the detection of tuberculosis in the treatment of patients with the help,
- to analyze the results of the Mantoux test with 2 TU PPD-L;
- to explain the concept of "convertion" of a tuberculin test and its importance for early diagnosis of tuberculosis.

Theme1. Definition of tuberculosis as a disease. The main epidemiological indicators prevalence of tuberculosis. The causative agent of tuberculosis, its properties. Ways contamination of tuberculous infection.

Definition of tuberculosis as a disease. Risk factors for TB.

The main epidemiological parameters (infection, morbidity, mortality) and their dynamics over the last 10-15 years. The spread of tuberculosis in countries with different levels of economic development.

Risk factors for TB. Pathogen, morphological structure, properties. Types of mycobacterium tuberculosis (MBT) and their epidemiological significance. Variability of the MBT (L-shaped, filtering forms, persistence, reversal). Chemo-resistant MBT and their clinical significance. Atypical mycobacteria. The resistance of MBT in the environment. Sources/center of tuberculosis infection. Isolation of mycobacteria into the environment. Ways of contamination of MBT.

Theme 2. Features of clinical examination of a patient with tuberculosis. Radiological diagnosing of tuberculosis. Methods of X-ray examination in the clinic of tuberculosis. Radiological syndromes of tuberculosis.

Ways and methods for detecting tuberculosis. Categories of people at high risk for TB.

Features of clinical examination of a patient with tuberculosis: complaints, medical history, course, epidemiological history, diseases, conditions of work and life; physical examination methods: the significance of palpation, percussion and auscultation in the examination of a patient with tuberculosis; diagnostic value of changes in the general blood test in patients with pulmonary tuberculosis.

Methods of X-ray examination of patient with the pulmonary tuberculosis and intrathoracic lymphatic nodes (X-ray, tomography, and fluorography, computed tomography, radioscopy). X-ray syndromes: lung root damage, dissemination, infiltration, circular shadow, cavity, fibrosis. Clinical forms of pulmonary tuberculosis in the X-ray image.

Theme 3. Bacteriologic diagnosing of tuberculosis. Mantoux test.

Microbiological diagnostics: methods of bacterioscopic, bacteriological and biological detection of MBT, the significance of their results for the diagnosis of tuberculosis. Determination of the sensitivity of MBT to anti-TB drugs. Express methods of molecular genetic diagnosing of tuberculosis.

The aim of tuberculin diagnostics. The notion of tuberculin. Mantoux test with 2TU PPD-L: indications, technique, evaluation of its results. The notion of "conversion"

tuberculin test. Differential diagnosis postvaccine and infectious immunity. Gamma interferon release test.

Semantic module 2. Treatment and prevention of tuberculosis.

Specific goals:

- to interpret the basic principles of treatment of a patient with tuberculosis;
- to diagnose side effects of anti-tuberculous drugs and determine methods of their prevention;
- to make up standard regimens of antimycobacterial therapy;
- to determine the types of drug resistance of MBT;
- to determine the criteria for the treatment of tuberculous patients;
- to determine indications and contraindications for BCG vaccination/revaccination;
- to describe the complications of BCG vaccination (revaccination);
- to determine the criteria of epidemiological danger of center TB infections;
- to determine indications for chemoprophylaxis (treatment of latent tuberculosis infection).

***Theme 4. Treatment of tuberculosis: basic principles. Anti-TB drugs. Standart drug regimens. Chemoresistant tuberculosis*.**

General principles of antimycobacterial therapy: complexity, combination, controllability, two-phase treatment, duration and continuity, individual approach, stage sequence, free of charge. Anti-TB drugs: classification, dosages, methods and multiplicity of administration in the patient's body. The side effects of anti-TB drugs, their prevention and methods of elimination. Categories of treatment for patients with tuberculosis. Standard regimens for treatment of patients with active tuberculosis. Chemo-resistant tuberculosis: clinical manifestations and treatment of a patient with tuberculosis with drug resistance

Criteria for the effective treatment of a patient with tuberculosis.

Theme 5. Nonspecific treatment of tuberculosis: basic principles. Spa treatment.

Hygiene and diet regime in the clinic of tuberculosis. Pathogenetic treatment in the intensive phase (anti-inflammatory, detoxification therapy, elimination of side effects of antimycobacterial drugs) and in the supporting phase (general strengthening therapy). Symptomatic treatment, physiotherapy. Sanatorium and resort treatment for patients with tuberculosis.

Theme 6. Surgical treatment.

Basic surgical methods of treatment for tuberculosis of the respiratory organs (operations on the lungs, operations on the pleura). Indications, contraindications.

Theme 7. Prevention of tuberculosis.

Social prevention. Infectious disease control. Components of infection control: administrative control, control of the air condition of indoor premises, individual protection ofrespiratory organs.

Sanitary prevention, its task. Concept about the center of tuberculous infection. Categories of centers according to the degree of epidemiological danger, criteria for its

determination. Work in the centers of tuberculosis infection in the prevention of tuberculosis.

BCG and BCG-M vaccination, BCG revaccination. BCG and BCG-M vaccine, vaccination and revaccination technique. Indications and contraindications for BCG vaccination and revaccination. Assessment of local reactions of the body to the introduction of the vaccine. Complications of TB vaccinations.

Chemoprophylaxis of tuberculosis (treatment of latent tuberculosis infection) indications, methods of conducting.

Semantic module 3. Clinical classification of tuberculosis. Primary and secondary forms oftuberculosis.

Specific goals:

- to analyze the main sections of the clinical classification of tuberculosis;
- to establish a diagnosis of primary and secondary forms of tuberculosis based on anamnestic,clinical-radiological and laboratory data;
- to formulate a clinical diagnosis of tuberculosis according to the classification;
- to prescribe complex therapy for patients with primary and secondary forms tuberculosis;
- to analyze the peculiarities of the course and treatment of patients with tuberculosis lungs associated with HIV infection;
- to prescribe a patient examination plan for the diagnosis of tuberculosis mucous membranes of the oral cavity and maxillofacial bones.

Theme 8. Clinical classification of tuberculosis.

Principles of construction of classification of tuberculosis. Classification categories: the type of tuberculous process, the main clinical forms, the characteristics of the tuberculosis process and its complications, the clinical and dispensary categories of patient records, the effectiveness of treatment for patients with tuberculosis, the effects of tuberculosis. Formulation of the diagnosis of tuberculosis according to the classification.

Theme 9. Tuberculosis of unknown location. Tuberculosis of the intrathoracic lymphatic nodes. Primary tuberculous complex. Complications of primary forms of tuberculosis.

Morphological basis of tuberculosis of unknown location. Clinical manifestations, course. Treatment.

Classification of intrathoracic lymphatic nodes. Clinical and X-ray forms of tuberculous bronchoenadenitis: infiltrative, tumorous, "small". Pathogenesis, pathomorphology,clinic, course. Treatment. Consequences.

Pathogenesis and pathomorphology of the primary tuberculous complex. Clinical manifestations, course, diagnostics. Differential diagnosis with nonspecific pneumonia. Treatment. Consequences.

Residual changes after local forms of primary tuberculosis and their significance for the emergence of secondary forms of tuberculosis.

Complications of tuberculosis of intrathoracic lymphatic nodes and primary tuberculous complex (atelectasis, specific bronchial lesion, bronchonodulatory fistula, hematogenous or lymphatic hematogenous dissemination, pleurisy, decay and formation of

the primary cavity), diagnosis, treatment.

Theme 10. Disseminated pulmonary tuberculosis. Miliary tuberculosis. Tuberculosis of the nervous system and the mucous membranes. Tuberculosis of the maxillofacial localization: clinic, diagnosis, features of treatment of patients with tuberculosis of the mucous membranes ofthe oral cavity and maxillo-facial bones.

Pathogenesis and pathomorphology of disseminated pulmonary tuberculosis. Clinical variants of the course (acute, subacute, chronic) and their radiological signs. Clinic, diagnostics. Treatment. Consequences. Pathogenesis and pathomorphology of miliary tuberculosis. Clinical options.Diagnosis. Treatment. Consequences.

Pathogenesis and pathomorphology of the tuberculosis of the nervous system, the cerebral membranes. Clinic. Features of diagnosis and course of tuberculous meningitis. Spinal cord puncture and interpretation of the results of the study of cerebrospinal fluid. Treatment. Consequences. Forecast.

Pathogenesis, pathomorphology and classification of tuberculosis of the mucous membranes of the oral cavity and maxillo-facial bones. Basic clinical manifestations. Treatment. Consequences.

Theme 11. Focal and infiltrative pulmonary tuberculosis. Caseous pneumonia. Tuberculoma of the lungs. Fibro- cavernous and cirrhotic pulmonary tuberculosis. Tuberculous pleurisy (empyema). Diagnosing and treatment of complications of tuberculosis, which need of emergency care: pulmonary hemorrhage, spontaneous pneumothorax.

Pathogenesis, pathomorphology, clinic and the course of focal and infiltrative forms oftuberculosis. Causes of the progression of focal, infiltrative tuberculosis. Clinical and X-ray variants of infiltrates.

Causes of development of caseous pneumonia, peculiarities of its course. Treatment. Consequences. Classification of pulmonary tuberculoma. Peculiarities of the course. Treatment.Consequences.

Causes of development of fibro-cavernous tuberculosis of the lungs. The main clinical syndromes, radiological signs of fibro-cavernous and cirrhotic pulmonary tuberculosis. Treatment.Consequences.

Tuberculous pleurisy. Pathogenesis, pathomorphology, clinic, diagnosis, differential diagnostics, treatment, consequences. Indications for pleural puncture, method of its conduct. Consequences.

Pathogenesis, clinic, diagnostics and principles of treatment of hemoptysis, spontaneous pneumothorax. Emergency delivery with pulmonary hemorrhage, spontaneous pneumothorax.

Theme 12. Tuberculosis of peripheral lymphatic nodes. Tuberculosis of bones and joints. Clinic, diagnostics, treatment.

Pathogenesis, pathomorphology, local and general manifestations, clinical forms of tuberculosis of peripheral lymphatic nodes. Diagnosis. Treatment.

Clinic for tuberculosis of bones and joints. Diagnosis. Treatment.

Theme 13. Tuberculosis and pregnancy.

Tuberculosis in combination with pregnancy. Clinic, diagnosis of tuberculosis during pregnancy. Features of treatment.

Theme 14. Tuberculosis in HIV/AIDS patients. Clinic, diagnosing, features of the course and treatment.

Detection of tuberculosis in HIV-infected and AIDS patients. Features of the course of tuberculosis in HIV-infected and AIDS patients. Treatment, prevention of tuberculosis in HIV-infected and AIDS patients.

3. Structure of the academic discipline

Topics	Lectures	Practical Lessons	S-Ws
Content module1. General issues of phthisiology. Method of examination of apatient with tuberculosis.			
Theme 1. Definition of tuberculosis as a disease. The main epidemiological indicators prevalence of tuberculosis. The causative agent of tuberculosis, its properties. Ways contamination of tuberculous infection.	-	2	6
Theme 2. Features of clinical examination of a patient with tuberculosis. Radiological diagnosing of tuberculosis. Methods of X-ray examination in the clinic of tuberculosis. Radiological syndromes of tuberculosis.	1	2	-
Theme 3. Bacteriologic diagnosing of tuberculosis. Mantoux test.	1	2	-
Together with content module 1	**2**	**6**	**6**
Content module 2. Treatment and prevention of tuberculosis.			
Theme 4. Treatment of tuberculosis: basic principles. Anti-TB drugs. Standards drug regimens.	1	2	-
Theme 5. Nonspecific treatment of tuberculosis. Spa treatment.	-	-	3
Theme 6. Surgical treatment.	-	-	3
Theme 7. Prevention of tuberculosis**.**	1	2	-
Together with content module 2	**2**	**4**	**6**
Content module 3. Clinical classification of tuberculosis. Primary and secondary forms of tuberculosis.			
Theme 8. Clinical classification of tuberculosis.	-	2	-
Theme 9. Tuberculosis of unknown location. Tuberculosis of the intrathoracic lymphatic nodes. Primary tuberculous complex. Complications of primary forms of tuberculosis.	-	2	-
Theme 10. Disseminated pulmonary tuberculosis. Miliary tuberculosis. Tuberculosis of the nervous system and the mucous membranes. Tuberculosis of the maxillofacial localization: clinic, diagnosis, features of treatment of patients with tuberculosis of the mucous membranes ofthe oral cavity and maxillo-facial bones.	-	2	-
Theme 11. Focal and infiltrative pulmonary tuberculosis. Caseous pneumonia. Tuberculoma of the lungs. Fibro- cavernous and cirrhotic pulmonary tuberculosis. Tuberculous pleurisy (empyema). Diagnosing and treatment of complications of tuberculosis, which need of emergency care: pulmonary hemorrhage, spontaneous pneumothorax.	-	2	3

Theme 12. Tuberculosis of peripheral lymphatic nodes. Tuberculosis of bones and joints. Clinic, diagnostics, treatment.	-	-	3
Theme 13. Tuberculosis and pregnancy.	-	-	2
Theme 14. Tuberculosis in HIV/AIDS patients. Clinic, diagnosing, features of the course and treatment.	-	-	3
Together with content module 3	-	8	11
Total hours - 45/1,5 credits ECTS	**4**	**18**	**23**
Final control	**exam**		

4. Thematic plan of discipline lectures

№	Topics	Hours
1	**2**	**3**
1.	Diagnosing of tuberculosis. Special methods of detection and diagnosing of tuberculosis	2
2.	General principles and methods of treatment of tuberculosis patients. Prevention of tuberculosis	2
	All	4

5. Thematic plan of practical classes

№	TOPICS	Hours
1.	Definition of tuberculosis as a disease. The main epidemiological indicators prevalence of tuberculosis. The causative agent of tuberculosis, its properties. Ways of tuberculous infection.	2
2.	Features of clinical examination of a patient with tuberculosis. Radiological diagnosing of tuberculosis. Methods of X-ray examination in the clinic tuberculosis. Radiological syndromes of tuberculosis.	2
3.	Bacteriologic diagnosing of tuberculosis. Mantoux test.	2
4.	Treatment of tuberculosis: basic principles. Anti-TB drugs. Standart drug regimens. Chemoresistant tuberculosis.	2
5.	Prevention of tuberculosis.	2
6.	Clinical classification of tuberculosis.	2
7.	Primary tuberculosis. Tuberculosis of unknown location. Tuberculosis of the intrathoracic lymphatic nodes. Primary TB complex. Complication primary forms of tuberculosis.	2
8.	Disseminated tuberculosis. Miliary tuberculosis. Tuberculosis of nervous system. Tuberculous meningitis. Tuberculosis of maxillofacial localization: clinic, diagnosis, features of treatment of patients with tuberculosis of the mucous membranes of the oral cavity and maxillofacial bones.	2
9.	Focal and infiltrative tuberculosis of lungs. Caseous pneumonia. Fibro-cavernous tuberculosis. Cirrhotic tuberculosis. Tubercular pleurisy (empyema). Diagnosing and treatment of complications of tuberculosis, which need of emergency care: pulmonary hemorrhage, spontaneous pneumothorax.	2
	Together:	**18**

6. Thematic plan of Self Working

№	Theme of self-working	Hours	Type ofcontrol
1.	The causative agent of tuberculosis, its types and forms of existence. Persistance and reversion of M. tuberculosis. Chemist-resistant MBT and their clinical significance.	3	Current control on practical classes
2.	The main epidemiological indicators of tuberculosis and their assessment.	3	
3.	Nonspesific treatment of tuberculosis: basic principles. Spa treatment	3	
4.	Surgical methods of tuberculosis treatment.	3	
5.	Pulmonary tuberculoma. Clinic, diagnosing, treatment.	3	
6.	Tuberculosis of peripheral lymphatic nodes. Tuberculosis bones and joints. Clinic, diagnosis, treatment.	3	
7.	Tuberculosis and pregnancy.	2	
8.	Tuberculosis in HIV/AIDS patients. Clinic, diagnosing, features of the course and treatment.	3	
	Together:	**23**	

7. Methods of training

Verbal - explanation, briefing, educational discussion.
Visual - illustration (tables, X-rays, results of analyzes and other survey methods);
- demonstration (diagnostic and therapeutic manipulations).
Practical - the formation of skills and abilities of clinical examination of patients, the implementation of the prescribed medical manipulation program, emergency assistance.
Interactive - which involves working in small groups to perform a specific set of tasks; simulation of clinical situations.

Organizational structure of training:

Preparatory stage (10-20% of working time): organization of classes, setting educational goals, control of the initial level of knowledge.

The main stage (60-90% of working time): formation of professional skills and abilities. Students independently and under the supervision of the teacher carry out curation of patients: collect medical history, master the skills of objective examination, interpret X-ray and laboratory data, substantiate the clinical diagnosis, carry out differential diagnosis, and prescribe treatment.

The final stage (10-20% of working time): control and correction of the level of professional skills and abilities, summarizing, homework.

8. Methods of control

The control is carried out by a comprehensive assessment of the theoretical and practical training of the student on the basis of oral questioning, test control, the solution of clinical situational tasks, demonstration of practical skills and abilities.

- Types of control - current and final
- Form of final control according to the curriculum – credit

- Evaluation criteria

Criteria for evaluation

Assessment of the student's oral response			
«Perfect»	«Good»	«Satisfactorily»	«Unsatisfactorily»
The student profoundly and firmly mastered the material; consistently, competently and logically teaches him, closely relates theory withpractice, freely copes with issues.	A student knows the material competently and substantially compliant and does not allow material mistakesin answering questions.	The student has knowledge of the main material, but did not learn its details, makes mistakes, violates the sequence in the presentation of thematerial.	The student does not know part of the software, allowsfor significant errors, is not sure ofthe answer.
Assessment of the solution of test tasks			
«Perfect»	«Good»	«Satisfactorily»	«Unsatisfactorily»
100-91%	90-76%	75-51%	50 i less%
Assessment of the solution of a clinical situational problem			
«Perfect»	«Good»	«Satisfactorily»	«Unsatisfactorily»
Precisely formulated and fully substantiatedclinical diagnosis in the patient and put on a treatmentplan.	A precisely formulated and partly substantiated clinical diagnosis of the patient, inaccuracies in thepreparation of the treatment plan have been made.	There were difficulties in substantiating the clinical diagnosis,drawing up a patient's treatmentplan.	No answer to thetask is given.
Assessment of the demonstration of practical skills			
«Perfect»	«Good»	«Satisfactorily»	«Unsatisfactorily»
The student has mastered the practical skills provided by theprogram.	The student performs practical skills, but does not assume fundamental errors.	The student made serious mistakes in the implementation of practical skills.	The student did not develop practical skills; did not develop the skills provided by the program.

9. **Current control** is carried out during training sessions and is aimed at checking the assimilation of educational material by students

Estimation of the current educational activity when assessing the mastering of eachtopic in the course of the current educational activity, the student is assessed on a 4- point (traditional) scale, taking into account the criteria for assessing the discipline. Ittakes into account all types of works provided for by the curriculum. A student receives an assessment from each topic for further conversion of grades into points on a multi-point (200-point) scale.

10. **Forms of assessment of the current academicactivity** – credit.

Semester assessment is a form of final control, which consists in assessing the student's learning of the educational material based solely on the results of his performance of certain types of work in practical classes. Semester credit for disciplines is conducted after the end of its study, before the beginning of the examination session.

11. Scheme of calculation and distribution of points received by students:

For disciplines in which the form of final control is credit:

The maximum number of points a student can score for the current semester entrance exam for the entrance exam is 200 points.

The minimum number of points that a student must score for current educational activities for the discipline is 120 points.

The calculation of the number of points is based on the student's assessment of the traditional scale during the study of discipline, by calculating the average arithmetic (CA), rounded to two decimal places. The resulting value is converted to a score on a multi-scale scale in the following way:

$$x = \frac{\text{CA} \times 200}{5}$$

For convenience, a recalculation table is given on a 200-point scale:

Recalculation of the average for the current activity in the multi-point scale for the disciplines ending with the exam.

4-score scale	200-score scale	4-score scale	200-score scale	4-score scale	200-score scale	4-score scale	200-score scale	4-score scale	200-score scale	4-score scale	200-score scale
5	200	4.72	189	4.45	178	4.17	167	3.92	157	3.65	146
4.97	199	4.7	188	4.42	177	4.14	166	3.89	156	3.62	145
4.95	198	4.67	187	4.4	176	4.12	165	3.87	155	3.57	143
4.92	197	4.65	186	4.37	175	4.09	164	3.84	154	3.55	142
4.9	196	4.62	185	4.35	174	4.07	163	3.82	153	3.52	141
4.87	195	4.6	184	4.32	173	4.04	162	3.79	152	3.5	140
4.85	194	4.57	183	4.3	172	4.02	161	3.77	151	3.47	139
4.82	193	4.52	181	4.27	171	3.99	160	3.74	150	3.45	138
4.8	192	4.5	180	4.24	170	3.97	159	3.72	149	3.42	137
4.77	191	4.47	179	4.22	169	3.94	158	3.7	148	3.4	136
4.75	190			4.19	168			3.67	147	Less than 3	Not enough

Independent work of students is assessed during the current control of the topic in the relevant class. Assimilation of those that are imposed only on independent work is controlled by the final control.

Points in the discipline are independently converted into both the ECTS scale and the 4-point (national) scale. ECTS scale points are not converted to a 4-point scale and vice versa.

The scores of students studying in one specialty, taking into account the number of points scored in the discipline, are ranked according to the ECTS scale as follows:

Assessment of ECTS	The statistical indicator
A	**The best 10% of students**
B	**The next 25% of students**
C	**The next 30% of students**
D	**The next 25% of students**
E	**The last 10% of students**

Ranking with the assignment of grades "A", "B", "C", "D", "E" is carried out for

students of this course who study in one specialty and have successfully completed the study of the discipline. Students who receive FX, F ("2") grades are not included in the list of ranked students. Students with an FX score after retaking automatically receive an "E" score.

Points in the discipline for students who have successfully completed the program, the envelope-are in the traditional 4-point scale on absolute criteria, which are shown below in the table:

Score points	Score on the 4- score
From 170 to 200 points	5
From 140 to 169 points	4
From 139 points to the minimum number of points a student should	3
Below is the minimum number of points that the student should	2

The ECTS mark on a traditional scale is not converted because the ECTS scale and the four-point scale are independent.

Objectivity of assessment of students' educational activity is checked by statistical methods (correlation coefficient between ECTS assessment and national scale assessment).

12. Methodological support: methodological development of lectures and practical classes, tasks for independent work, questions, test tasks, clinical tasks for the current and final control of students' knowledge and skills.

13. Recommended Books

Basic literature:

1. Phthysiology. nats textbook/edited by V.I. Petrenko,. - Kyiv.: VVV "Medicine", 2015. - 472 p.
2. Pulmonology and phthisiology: a textbook in 2 volumes / Ed. Yu.I.Feshchenko, V.P. Melnyk, I.G.Ilnitsky. - Kyiv, Lviv: Atlas, 2009 - 1336 p.
3. Infectious diseases with the basics of phthisiopulmonology. Training manual / Il'nitsky I. G., Chornovil A.V., Gritsko R.Yu., Kostyk O.P., Sichkoriz O.Ye., Rudnitskaya K.I.- Lviv, 2009.- 404 p.
4. Phthysiology. Educational manual / edited by V.P. Melnik, I.G. Ilnitsky. - Kyiv - Lviv: Atlas, 2008. – 304 p.
5. Phthysiology. Textbook / Ed. acad. AND I. Tsyganenko, prof. S.I. Zaitseva - X .: Fakty, 2004. 390 p.
6. Savula M.M., Ladny O.Ya. Tuberculosis. Textbook. Ternopil: "UkrmedkNiga", 1999. - 323 p.
7. Order of the Ministry of Health of Ukraine 19.01.2023 № 102 "Standards of medical

care "Tuberculosis".

Additional literature:

1 Mykolyshyn L.I., Piskur Z.I. Organization of detection and diagnosis of extrapulmonary tuberculosis in children. Tutorial. - Lviv: LNMU, 2016. – 108 p.
2. Tuberculosis prevention: a textbook for students, interns and doctors/B.I. Petrenko, M.G. Dolinskaya, A.V. Alexandrin, V.V. Petrenko. – Kiïv:2Print, 2017. – 88 p.
3. 3. Clinical and radiological atlas for the diagnosis of lung diseases. Textbook/Edited by L. D. Todoriko.- Chernivtsi: Medical University, 2014.- 342 p.
4. Phthisiology: a teaching manual. Collection of tasks for test control of knowledge / Ed. V.F. Moskalenko, V.I. Petrenko - Vinnitsa: The New Book, 2005. 296p.
5. Tuberculosis of extrapulmonary localization / Yu.I. Feshchenko, IG Ilnitsky, VM Melnik, O.V. Panasyuk; for ed. Yu.I. Feshchenko, IG Ilnitsky - Kyiv: Logos, 1998. - 376 p.
6. Diseases of the respiratory system. Reference book / Yu.I.Feshchenko, V.M.Melnyk, I.G.Ilnitsky. - Kyiv - Lviv: Atlas, 2008. – 497 p.
7. Savula M.M., Ladny O.Ya., Kravchenko N.S., Slyvka Yu.I. Differential diagnostics of diseases of the lungs and pleura. Ternopil: "UkrmedkNiga", 2000 – 223 p.
8. Feshchenko Yu.I. Organization of control of chemo-resistant tuberculosis. Production edition. - Kyiv: Health, 2013. - 704 p.
9. Tuberculosis, HIV / AIDS: teaching. manual / R.G. Protsyuk, V.F. Moskalenko, V.I. Petrenko and others. Kyiv: Medicine, 2009. - 424 p.
10. Applied questions of phthysiology of children and adolescence: Textbook / Ed. Ilnitsky I.G., Kostyk O.P., Bilozir L.I., - Lviv: Atlas, 2013. - 731 p.

Information resources

1. State institution "Ukrainian Center for the control of social diseases of the Ministry of Health of Ukraine": http://ucdc.gov.ua.
2. The site of the National Institute of Phthisiology and Pulmonology named after FG Yanovsky: http://www.ifp.kiev.ua/doc.
3. Tuberculosis, pulmonary diseases, HIV infection. Ukrainian Scientific andPractical Journal www.tubvil.com.ua.
4. USAID "Strengthening TB Control in Ukraine" Website: http://www.stbcu.com.ua.