



SYLABUS ON DISCIPLINE "Phthisiology"

1. General information

Name of the faculty	Medical
Educational program (industry, specialty, level of higher education, form of education)	22 Healthcare, 222 Medicine, second level of higher education (master's degree), full-time
Academic year	2023/2024
Name of discipline, code (<i>e-mail on the website of Danylo Halytsky LNMU</i>)	Phthisiology, OC 36 Infectious diseases, including phthisiology, OC 27
Department (name, address, telephone, e-mail)	Phthisiology and Pulmonology, 79066, Lviv, st. Green 477; (032)236-89-42; kaf_phthisiology@meduniv.lviv.ua
Head of the department (contact e-mail)	Prof. Kostyk O.P. kaf_phthisiology@meduniv.lviv.ua
Year of study (year in which the study of the discipline)	5th
Semester (semester in which the study of the discipline is implemented)	9-10
Type of course / module (compulsory / optional)	Compulsory
Teachers (names, surnames, research and development of teachers who teach the discipline, contact e-mail)	Alexander Nevzgodia; Ph.D., Associate Professor; sashko.nev0703@gmail.com Khrystyna Volnytska; Ph.D., Associate Professor; christinka.rud86@gmail.com Zoriana Piskur; Ph.D., Associate Professor; zorjanapiskur@gmail.com
Erasmus yes / no (availability of discipline for students within the program Erasmus+)	No
Person responsible for the syllabus (person to be commented on the syllabus, e-mail)	A.Nevzgodia; Ph.D., Associate Professor sashko.nev0703@gmail.com
Number of credits ECTS	2
Number of hours (<i>lectures / practical classes / self-work of students</i>)	60 hours (8 hours of lectures / 22 hours of practical lessons / 30 hours of self-work)
Language of instruction	Ukrainian /English
Information about consultations	
Address, telephone and rules of operation of the clinical base	KNP ENT "Lviv Regional Phthiocio-Pulmonology Clinical Medical and Diagnostic Center"; 79066, Lviv, 477 Green Street; (032) 236-89-00
2. Short annotation to the course	

The discipline “Phthysiology” is a mandatory component of the educational and professional training program for masters of medicine. 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 examinations, formulate a clinical diagnosis, prescribe treatment, provide emergency medical care.

3. The purpose and objectives of the course

1. The purpose of teaching the discipline “Phthysiology” is acquisition by students of basic knowledge of Phthysiology, mastering modern diagnostic methods, differential diagnosis, treatment, prevention of tuberculosis, the formation of the ability to use knowledge, skills, abilities to solve various problems of medical practice in health care.

2. The main tasks of studying the discipline “Phthysiology” are:

- determine the risk factors for tuberculosis;
- interpret the results of tuberculin tests, bacterioscopic and bacteriological methods of sputum research;
- determine clinical forms of tuberculosis and formulate a clinical diagnosis according to the classification;
- make the scheme of examination of the patient with tuberculosis, to analyze the received data;
- prescribe standard treatment regimens for patients with pulmonary tuberculosis;
- determine the consequences of treatment of patients with pulmonary tuberculosis;
- diagnose emergency conditions in patients with tuberculosis and provide them with emergency care.

3. Competences and learning outcomes, the formation of which provides the study of the discipline (general and special competencies).

The discipline ensures the acquisition of competencies by students in accordance with the requirements of the Standard of Higher Education.

Integral competence - the ability to solve complex problems, including research and innovation in the field of medicine. Ability to continue learning with a high degree of autonomy.

-General:

GC1 – Ability to abstract thinking, analysis and synthesis.

GC2 – Ability to learn and master modern knowledge.

GC3 – Ability to apply knowledge in practical situations.

GC4 – Knowledge and understanding of the subject area and understanding of professional activity.

GC5 – Ability to adapt and act in a new situation.

GC6 – Ability to make informed decisions.

GC7 – Ability to work in a team.

GC8 – Interpersonal skills.

GC9 – Ability to communicate in a foreign language.

GC10 - Ability to use information and communication technologies.

GC11 – Ability to search, study and analyze information from various sources.

GC12 – Definiteness and perseverance in terms of tasks and responsibilities.

GC13 – Awareness of equal opportunities and gender issues.

GC14 – 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.

GC15 – 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.

-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 examinations and evaluate their results.

SC3 – Ability to establish preliminary and clinical diagnoses of tuberculosis.

SC4 – Ability to determine the required mode of work and rest in the treatment of tuberculosis.

SC5 – Ability to determine the nature of nutrition in the treatment and prevention of tuberculosis.

SC6 – Ability to determine the principles and nature of treatment and prevention of tuberculosis.

SC7 – Ability to diagnose of emergency conditions.

SC8 – Ability to determine the tactics of emergency medical care.

SC10 – Skills to perform medical manipulations.

SC13 – Ability to carry out sanitary and hygienic and preventive measures.

SC14 – Ability to plan and carry out preventive and anti-epidemic measures against tuberculosis.

SC16 – Ability to maintain medical records, including electronic forms.

SC24 – Compliance with ethical principles when working with patients, laboratory animals. Ability to conduct a performance examination.

SC25 – Compliance with professional and academic integrity, be responsible for the reliability of the scientific results obtained.

4. Course details

The student needs basic knowledge and learning outcomes of the following disciplines to successfully study and master the competencies of the discipline “Phthisiology”:

- human anatomy - know the anatomy of the respiratory system;
- physiology - to know the physiology of the respiratory system;
- pathomorphology - to know pathomorphological changes of organs at tuberculosis;
- pathophysiology - to know the pathophysiology of the respiratory system;
- microbiology - to know the morphological structure, properties, pathogenicity and virulence of Mycobacterium tuberculosis, methods of their detection in sputum and other materials, to be able to collect material for bacteriological examination, to evaluate the results;
- pharmacology - to know antimycobacterial drugs, mechanisms of action, side effects, to be able to prescribe them to the patient;
- propaedeutics of internal medicine - to know the method of questioning and objective examination of the patient, to be able to collect medical history and examine the patient, evaluate the data obtained;
- propaedeutics of pediatrics - to know the method of questioning and objective examination of the child, to be able to collect anamnesis and examine the child;
- radiology - to know the radiological features of the chest in normal and pathological conditions, radiological symptoms and syndromes, to be able to detect and interpret radiological events in the lungs;
- internal medicine - to know the clinical manifestations, X-ray semiotics of diseases of the respiratory system, to be able to conduct a differential diagnosis of respiratory diseases;
- hygiene and ecology - to know methods of disease prevention;
- epidemiology - to know the links of the epidemiological process (source of infection, ways of infection transmission, susceptibility of the organism).

5. Program learning outcomes

PTR-1. Have knowledge of the structure of professional activity. Be able to carry out professional activities that require updating and integration of knowledge. Be responsible for professional development, the ability to further professional training with a high level of

autonomy.

- PTR-2. Understanding and knowledge of basic and clinical biomedical sciences, at a level sufficient to solve professional problems in the field of health care.
- PTR-3. Specialized conceptual knowledge, which includes scientific achievements in the field of health and is the basis for research, critical understanding of problems in the field of medicine and related interdisciplinary problems.
- PTR-4. 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 preliminary clinical diagnosis of the disease.
- PTR-5. Collect complaints, history of life and disease, evaluate the psychomotor and physical development of the patient, the state of organs and systems of the body, based on the results of laboratory and instrumental studies, evaluate information on the diagnosis, taking into account the patient's age.
- PTR-6. Establish a final clinical diagnosis by making an informed decision and analyzing the obtained subjective and objective data of clinical, additional examination, differential diagnosis, observing the relevant ethical and legal norms, under the supervision of a physician-leader in a health care institution.
- PTR-7. Assign and analyze additional (mandatory and optional) methods of examination (laboratory, functional and/or instrumental), patients with diseases of organs and body systems for differential diagnosis of diseases.
- PTR-8. Determine the main clinical syndrome or what causes the severity of the condition of the victim/victim by making an informed decision and assessing the condition of a person under any circumstances (in the conditions of a health care institution, outside it), including in an emergency and military operations, in the field, in conditions of lack of information and limited time.
- PTR-9. Determine the nature and principles of treatment of patients with tuberculosis (conservative, operative), taking into account the age of the patient, in the conditions of the health care institution, outside it and at the stages of medical evacuation, incl. in the field, based on a preliminary clinical diagnosis, adhering to appropriate ethical and legal standards, by making an informed decision on existing algorithms and standard schemes, if necessary, expand the standard scheme to be able to justify personalized recommendations under the supervision of the doctor-manager in the conditions of the medical institution.
- PTR-10. Determine the necessary mode of work, rest and nutrition on the basis of the final clinical diagnosis, observing the relevant ethical and legal norms, by making an informed decision according to existing algorithms and standard schemes.
- PTR-14. Identify tactics and provide emergency medical care for medical emergencies in limited time settings in accordance with existing clinical protocols and treatment standards.
- PTR-17. Perform medical manipulations in a medical institution, at home or at work on the basis of a preliminary clinical diagnosis and/or indicators of the patient's condition by making an informed decision, observing appropriate ethical and legal standards.
- PTR-19. Plan and implement a system of anti-epidemic and preventive measures for the emergence

and spread of diseases among the population.

PTR-20. Analyze the epidemiological state and conduct mass and individual, general and local prevention of infectious diseases.

PTR-21. Search for necessary information in professional literature and databases of other sources, analyze, evaluate and apply this information.

PTR-24. Organize the necessary level of individual safety (own and persons cared for) in case of typical dangerous situations in the individual field of activity.

PTR-25. It is clear and unambiguous to convey their own knowledge, conclusions and arguments on health issues and related issues to specialists and non-specialists.

PTR-27. Communicate fluently in English, both orally and in writing to discuss professional activities, research and projects.

PTR-29. Plan, organize and conduct activities for the specific prevention of infectious diseases, including in accordance with the National calendar of preventive vaccinations, both mandatory and recommended. Manage vaccine residues, organize additional vaccination campaigns, including immunoprophylaxis activities.

List of learning outcomes

Learning outcome code	The content of the learning outcome	Reference to the code of the competence matrix
<i>The code is created when filling the syllabus (category: Kn-knowledge, A-ability, C-competence, AR - autonomy and responsibility)</i>	<i>Learning outcomes determine that the student must know, understand and be able to perform, after completing the discipline. Learning outcomes follow from the set learning goals. To enroll in the discipline, it is necessary to confirm the achievement of each learning outcome.</i>	Symbol of the Program Learning Outcome Code in the Higher Education Standard
<i>Kn-1</i> <i>A-1</i> <i>C-1</i> <i>AR-1</i>	Know the structure of professional activity. Be able to carry out professional activities by updating and integrating knowledge. Effectively form a communication strategy for the successful implementation of professional activities. Be responsible for professional development, the ability to further professional training with a high level of autonomy.	<i>PR-1</i>
<i>Kn-2</i> <i>A-2</i> <i>C-2</i>	Know and understand fundamental and clinical biomedical sciences at a level sufficient to solve professional problems in the field of health care. Be able to apply knowledge of basic and clinical biomedical sciences to successfully solve professional problems in the field of health care. Effectively apply interpersonal connections using knowledge from fundamental and clinical biomedical sciences to successfully solve professional problems in the field of health	<i>PR-2</i>

<i>AR-2</i>	care. Be responsible for using the knowledge of basic and clinical biomedical sciences to successfully solve professional problems in the field of health care.	
<i>Kn-3</i> <i>A-3</i> <i>K-3</i> <i>AR-3</i>	Know and understand scientific achievements in the field of health care to form specialized conceptual knowledge. Be able to apply scientific achievements in the field of healthcare to form specialized conceptual knowledge. Effectively form a communication strategy for successful research, critical understanding of problems in the field of medicine and related interdisciplinary problems. Be responsible for the successful conduct of research, critical understanding of problems in the field of medicine and related interdisciplinary problems.	<i>PR-3</i>
<i>Kn-4</i> <i>A-4</i> <i>C-4</i> <i>AR-4</i>	Know the leading clinical symptoms and syndromes. Be able to highlight leading clinical symptoms and syndromes using history data, patient examination data, knowledge about the person, his organs and systems, and establish a preliminary clinical diagnosis. Effectively form a communication strategy to isolate leading clinical symptoms and syndromes and establish a preliminary clinical diagnosis. Be responsible for the correct establishment of a preliminary clinical diagnosis.	<i>PR-4</i>
<i>Kn-5</i> <i>A-5</i> <i>C-5</i> <i>AR-5</i>	Know the standard schemes and methods of questioning, physical examination of the patient. Be able to collect patient complaints, history of the disease and life, conduct a general and detailed examination of the patient, and assess the data received. Effectively form a communication strategy when communicating with the patient and his relatives. Be responsible for the choice of communication method, qualitative review and clinical evaluation of the data obtained.	<i>PR-5</i>
<i>Kn-6</i> <i>A-6</i> <i>C-6</i> <i>AR-6</i>	Know the basic principles of establishing a clinical diagnosis. Be able to analyze the obtained patient examination data to establish a clinical diagnosis. Reasonably inform the patient and/or relatives about the clinical diagnosis. Be responsible for making informed decisions and actions on the correctness of the clinical diagnosis.	<i>PR-6</i>
<i>Kn-7</i> <i>A-7</i> <i>C-7</i> <i>AR-7</i>	Know the standard methods of laboratory and instrumental studies. Be able to prescribe laboratory and instrumental examination of the patient by applying standard techniques, analyze the results of laboratory and instrumental studies and on their basis evaluate information on the diagnosis of the patient. It is reasonable to assign and convey to the patient and/or his relatives (guardians) information on the list of necessary laboratory and instrumental studies. Be responsible for the correct appointment of laboratory and instrumental studies, timely and correct assessment of their results.	<i>PR-7</i>

<i>Kn-8</i>	Know the main clinical syndromes that can determine the severity of the condition of the victim.	<i>PR-8</i>
<i>A-8</i>	To be able to determine the main clinical syndrome, which determined the severity of the condition of the victim, by making an informed decision and assessing the condition of a person in any circumstances, including in an emergency and combat, in the field, in conditions of lack of information and limited time.	
<i>C-8</i>	Effectively form a communication strategy in determining the main clinical syndrome, which caused the severity of the condition of the victim under any circumstances, including in an emergency and combat, in the field, in conditions of lack of information and limited time.	
<i>AR-8</i>	Be responsible for the correct definition of the main clinical syndrome, which caused the severity of the condition of the victim, under any circumstances, including in conditions of emergency and hostilities, in the field, in conditions of lack of information and limited time.	
<i>Kn-9</i>	Have specialized knowledge of algorithms and standard TB treatment regimens.	<i>PR-9</i>
<i>A-9</i>	To be able to determine the principles and nature of treatment of various forms of tuberculosis.	
<i>C-9</i>	Form and convey to the patient and/or his relatives (guardians) their own conclusions about the principles and nature of treatment.	
<i>AR-9</i>	Be responsible for deciding on the principles and nature of the treatment of the disease.	
<i>Kn-10</i>	Know the algorithms and standard schemes for determining the mode of work and rest, therapeutic nutrition for tuberculosis.	<i>PR-10</i>
<i>A-10</i>	Be able to determine the necessary mode of work and rest, proper nutrition of patients with tuberculosis.	
<i>C-10</i>	Form and convey to the patient and/or his relatives (guardians) conclusions about the necessary mode of work and rest, proper nutrition for tuberculosis.	
<i>AR-10</i>	Be responsible for the validity of the appointment of the regime of work and rest, nutrition for the patient in the treatment of tuberculosis.	
<i>Kn-14</i>	Know the tactics of emergency medical care in emergency conditions in phthisiology.	<i>PR-14</i>
<i>A-14</i>	Be able to provide emergency medical care for medical emergencies in limited time settings in accordance with existing clinical protocols and treatment standards.	
<i>C-14</i>	Reasonably inform the patient and/or relatives about the need for emergency care and obtain consent for medical intervention.	
<i>AR-14</i>	Be responsible for the timeliness and quality of emergency medical care.	
<i>Kn-17</i>	Have specialized knowledge of algorithms for performing medical manipulations.	<i>PR-17</i>
<i>A-17</i>	Be able to perform medical manipulations.	
<i>C-17</i>	It is substantiated to form and bring to the patient, and/or his relatives (guardians) conclusions about the need for medical manipulations.	
<i>AR-17</i>	Be responsible for the quality of medical manipulation.	
<i>Kn-19</i>	Know the anti-epidemic and preventive measures for the	<i>PR-19</i>

<i>A-19</i>	emergence and spread of tuberculosis among the population. To be able to carry out sanitary-hygienic and preventive measures aimed at preventing infection and disease with tuberculosis of the population.	
<i>C-19</i>	Inform the population about the need for prevention of tuberculosis.	
<i>AR-19</i>	Be responsible for timely and high-quality TB prevention.	
<i>Kn-20</i>	Know the main epidemiological indicators of tuberculosis, the system of anti-epidemic measures of tuberculosis infection control.	<i>PR-20</i>
<i>A-20</i>	Be able to carry out anti-epidemic measures in the focus of tuberculous infection.	
<i>C-20</i>	Inform the population and medical staff about the need for anti-epidemic measures in the center of tuberculous infection and strict compliance with the requirements of infection control in medical institutions.	
<i>AR-20</i>	Be responsible for the timeliness of the organization of anti-epidemic measures in the focus of tuberculous infection and strict compliance with the requirements of infection control in medical institutions.	
<i>Kn-21</i>	Know the methodology for finding the necessary information in professional literature, Internet resources.	<i>PR-21</i>
<i>A-21</i>	Be able to analyze, evaluate and apply the information received.	
<i>C-21</i>	Establish interpersonal connections to search, analyze, evaluate the information received.	
<i>AR-21</i>	Be responsible for the analysis and adequate assessment of the information received from professional literature, Internet resources.	
<i>Kn-24</i>	Know the basic rules of individual safety in case of typical dangerous situations in the individual field of activity.	<i>PR-24</i>
<i>A-24</i>	Be able to provide the necessary level of individual safety in case of typical dangerous situations.	
<i>C-24</i>	Apply interpersonal skills to ensure the required level of individual safety in the event of typical dangerous situations.	
<i>AR-24</i>	Be responsible for ensuring the required level of individual safety in case of typical dangerous situations.	
<i>Kn-25</i>	Know the ways of conveying their own knowledge, conclusions and arguments on health issues and related issues to specialists and non-specialists.	<i>PR-25</i>
<i>A-25</i>	To be able to clearly and unambiguously convey their own knowledge, conclusions and argumentation on health problems and related issues to specialists and non-specialists.	
<i>C-25</i>	Establish interpersonal links to convey their own knowledge, conclusions and arguments on health issues and related issues to specialists and non-specialists.	
<i>AR-25</i>	Be responsible for the clear and unambiguous delivery of their own knowledge, conclusions and arguments on health issues and related issues to specialists and non-specialists.	
<i>Kn-27</i>	Fluent in English at the level of oral and written communication.	<i>PR-27</i>
<i>A-27</i>	Be able to communicate fluently in English to discuss professional activities, research and projects.	
<i>C-27</i>	Establish interpersonal links for free communication in English to discuss issues of professional activity, research and projects.	

<i>AR-27</i>	Be responsible for the ability to communicate fluently in English to discuss professional activities, research and projects.	
<i>Kn-29</i>	Know the features of specific prevention of tuberculosis (vaccination, BCG revaccination).	<i>PR-29</i>
<i>A-29</i>	Be able to organize and conduct specific prevention of tuberculosis.	
<i>C-29</i>	Inform the population about the need for timely specific prevention of tuberculosis.	
<i>AR-29</i>	Be responsible for quality and timely vaccination, BCG revaccination.	

6. Course format and scope

Course format		Offline/Eye	
Kind of occupations	Number of hours	Number of groups	
Lectures	8		
Practical lessons	22		
Self-work	30		

7. Topics and content of the course

Code type to classes	Topic	Learning content	Learning outcome code	Teacher
L-1	Definition of tuberculosis as a scientific and practical problem. History of phthisiology. Epidemiology of tuberculosis. Etiology, pathogenesis, tuberculosis. Tuberculosis immunity.	Tuberculosis as a social, medical and scientific problem. The main stages of development of the doctrine of tuberculosis. The main epidemiological indicators and their dynamics for the last 10-15 years. The causative agent of tuberculosis, morphological structure, properties. Tuberculosis infection, ways of penetration and spread of MBT in the human body. Humoral and cellular immunity are their mechanisms	PR-1 PR-2 PR-3 PR-21 PR-25 PR-27	Nevzgodina A.A.
L-2	Management of revealing of tuberculosis. Methods of detecting and diagnosing tuberculosis.	Ways and methods of tuberculosis detection. Categories of the population with an increased risk of tuberculosis. Involvement of health workers in detected tuberculosis. Methods of microbiological and radiological diagnostics. Tuberculin diagnosis.	PR-4 PR-5 PR-6 PR-7 PR-8	Nevzgodina A.A.

L-3	Treatment of tuberculosis: basic principles and methods.	General principles of treatment of a patient with tuberculosis. Antimycobacterial drugs. Standard treatment regimens for patients with tuberculosis. Criteria for the treatment of patients with tuberculosis.	PR-9 PR-10	Nevzgoda A.A.
L-4	Primary and secondary forms of tuberculosis.	Pathogenesis, pathomorphology, clinic, diagnosing, differential diagnosis, treatment of primary and secondary forms of tuberculosis.	PR-4 PR-5 PR-6 PR-7 PR-8	Nevzgoda A.A.
P-1	Epidemiology of tuberculosis. Etiology and pathogenesis of tuberculosis. Clinical classification of tuberculosis. Microbiological diagnosing of tuberculosis.	The main epidemiological indicators of tuberculosis (infection, morbidity, mortality). Risk factors for tuberculosis. The causative agent of tuberculosis, morphological structure, properties. Tuberculosis infection, ways of penetration and spread of MBT in the human body. Clinical classification of tuberculosis. Formulation of the diagnosis of tuberculosis according to the classification. Methods of microbiological diagnosis of tuberculosis.	PR-6 PR-7	Nevzgoda A.A. Volnytska K.I. Piskur Z.I.
P-2	Management of revealing of tuberculosis. Methods of detecting and diagnosing tuberculosis (x-ray, tuberculin skin test, gamma interferon test). Treatment of tuberculosis: basic principles. Anti-TB drugs. Standards drug regimens.	Categories of the population with an increased risk of tuberculosis. Methods of clinical examination of a patient with tuberculosis. X-ray syndromes. Clinical forms of pulmonary tuberculosis in the X-ray image. Methods of microbiological diagnosis of tuberculosis. Methods of X-ray examination of patients. The purpose of tuberculin testing. Mantoux test with 2 TU PPD-L. Gamma interferon release test. General principles of treatment of a patient with tuberculosis. Antimycobacterial drugs. Standard treatment regimens for patients with tuberculosis. Monitoring the condition of	PR-7 PR-9 PR-10 PR-17	Nevzgoda A.A. Volnytska K.I. Piskur Z.I.

		patients with tuberculosis during treatment. Criteria for the cure of patients with tuberculosis.		
P-3	<p>Tuberculosis of unknown location. Tuberculosis of intrathoracic lymphatic nodes. Primary tuberculous complex. Pathogenesis, pathomorphology, clinic, diagnosing, differential diagnosis, treatment, consequences.</p> <p>Complications of primary forms of tuberculosis.</p> <p>Disseminated tuberculosis. Miliary tuberculosis. Tuberculosis of nervous system. Tuberculous meningitis. Pathogenesis, pathomorphology, clinic, diagnosis, differential diagnosis, treatment, consequences.</p>	<p>Morphological basis of tuberculosis of unknown location. Clinical manifestations, course, differential diagnosis, treatment. Clinical and radiological forms of tuberculosis of intrathoracic lymphatic nodes. Pathogenesis, pathomorphology, clinic, course, diagnosis, differential diagnosis, treatment, consequences. Pathogenesis and pathomorphology of the primary tuberculosis complex. Clinical manifestations, course, diagnosis, differential diagnosis, treatment, consequences. Complications of tuberculosis of intrathoracic lymph nodes and primary tuberculosis complex. Pathogenesis and pathomorphology of disseminated pulmonary tuberculosis. Clinical variants and their radiological features. Clinic, diagnosis, differential diagnosis, treatment of disseminated tuberculosis. Consequences. Pathogenesis and pathomorphology of miliary tuberculosis. Clinical options, diagnosis, differential diagnosis, treatment, consequences. Pathogenesis and pathomorphology of tuberculous meningitis. Clinic, features of diagnosis and course, differential diagnosis, treatment, consequences.</p>	<p>PR-4 PR-5 PR-7 PR-8 PR-9 PR-10</p>	<p>Nevzgodina A.A. Volnytska K.I. Piskur Z.I.</p>
P-4	<p>Focal and infiltrative tuberculosis. Caseous pneumonia. Tuberculoma. Fibro-cavernous tuberculosis. Cirrhotic tuberculo-</p>	<p>Pathogenesis and pathomorphology, methods of detection, clinic and course of focal and infiltrative forms of tuberculosis. Features of</p>	<p>PR-4 PR-5 PR-6 PR-7 PR-8</p>	<p>Nevzgodina A.A. Volnytska K.I. Piskur Z.I.</p>

	<p>sis. Pathogenesis, pathomorphology, clinic, diagnosis, differential diagnosis, treatment, consequences. Pleural tuberculosis. TB pleuritis and empyema. Pathogenesis, pathomorphology, clinic, diagnosis, differential diagnosis, treatment, consequences. Complications of secondary tuberculosis: hemoptysis, hemorrhage, spontaneous pneumothorax, chronic cor pulmonare, amyloidosis of internal organs.</p>	<p>caseous pneumonia. Classification of tuberculomas. Causes of fibrocavernous pulmonary tuberculosis. Pathogenesis, pathomorphology, main clinical syndromes, radiological signs of fibrocavernous and cirrhotic pulmonary tuberculosis. Differential diagnosis, treatment, consequences. Pathogenesis, pathomorphology and classification of tuberculous pleurisy. The main clinical syndromes of pleurisy. Diagnosis, differential diagnosis, 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.</p>	<p>PR-9 PR-10 PR-14 PR-17</p>	
P-5	Prevention of tuberculosis.	<p>Social prevention. Sanitary prevention is its task. Work in the center of tuberculous infection on tuberculosis prevention. BCG vaccination and revaccination. Chemoprophylaxis of tuberculosis, indications, methods. Infection control.</p>	<p>PR-19 PR-20 PR-24 PR-29</p>	<p>Nevzgodina A.A. Volnytska K.I. Piskur Z.I.</p>
SW-1	<p>Peculiarities of the clinical examination of a patient with tuberculosis. Functional and instrumental methods in diagnostics tuberculosis.</p>	<p>Features of the clinical examination of a patient with tuberculosis: complaints, history of the disease, course, epidemiological history, past diseases, working and living conditions; physical examination methods: (palpation, percussion, auscultation); diagnostic significance of changes in the hemogram. Functional methods of examination. Study of external respiration</p>	<p>PR-4 PR-5 PR-6 PR-7 PR-8</p>	<p>Nevzgodina A.A. Volnytska K.I. Piskur Z.I.</p>

		function (spirometry). Electrocardiographic examination.		
SW-2	Nonspecific therapy of tuberculosis. Surgical treatment. Facilities in sanatoria and health resorts.	Hygiene-dietary regimen, pathogenetic and symptomatic treatment. Methods of surgical treatment of tuberculosis. Indications for surgery for tuberculosis. Facilities in sanatoria and health resorts.	PR-9 PR-10	Nevzgodia A.A. Volnytska K.I. Piskur Z.I.
SW-3	Tuberculosis of the peripheral lymphatic nodes. Bone and joints tuberculosis. Symptoms and signs. Diagnosis. Treatment.	Pathogenesis, pathomorphology, clinical forms of tuberculosis of peripheral lymph nodes. Diagnosis, treatment. Clinic of tuberculosis of bones and joints. Diagnosis, treatment.	PR-4 PR-5 PR-6 PR-7 PR-8 PR-9 PR-10	Nevzgodia A.A. Volnytska K.I. Piskur Z.I.
SW-4	Pulmonary tuberculosis combined with dust professional pulmonary disease.	Pneumoconiosis. Classification, pathomorphology, forms, course. Silicosis. Silicotuberculosis. Clinic, radiological characteristics, treatment.	PR-4 PR-5 PR-6 PR-7 PR-8 PR-9 PR-10	Nevzgodia A.A. Volnytska K.I. Piskur Z.I.
SW-5	Tuberculosis and pregnancy. Tuberculosis in patients with diabetes mellitus, gastric and duodenal ulcer.	Development of tuberculosis in pregnant women. Clinic, diagnosis of tuberculosis during pregnancy. Features of treatment. The course, diagnosis, treatment of tuberculosis in patients with diabetes mellitus and gastric ulcer.	PR-4 PR-5 PR-6 PR-7 PR-8 PR-9 PR-10	Nevzgodia A.A. Volnytska K.I. Piskur Z.I.
SW-6	Tuberculosis in HIV/AIDS patients.	Detection of tuberculosis in HIV-infected and AIDS patients. Features of tuberculosis in HIV-infected and AIDS patients. Treatment and prevention of tuberculosis in HIV-infected and AIDS patients.	PR-4 PR-5 PR-6 PR-7 PR-8 PR-9 PR-10 PR-19 PR-20 PR-24	Nevzgodia A.A. Volnytska K.I. Piskur Z.I.

Teaching methods

Verbal - explanations, briefings, educational discussion.

Visual - illustrations (tables, radiographs, test results and other methods of examination);

- demonstration (diagnostic and therapeutic manipulations).

Practical - the formation of skills and abilities of clinical examination of patients, the implementation of the medical manipulations provided by the program, the provision of emergency care.

Interactive - which involve working in small groups to perform a specific set of tasks; modeling of clinical situations.

8. Verification of learning outcomes

Current control

is carried out during classes and aims to verify the assimilation of students' learning material. Control is carried out by a comprehensive assessment of theoretical and practical training of the student on the basis of oral examination, test control, solving clinical situational problems, demonstration of practical skills and abilities. The final grade for the current educational activity is set on a 4-point (national) scale with subsequent conversion into a multi-point scale.

Evaluation criteria

Assessment of the student's oral response

«perfectly»	«good»	«satisfactorily»	«unsatisfactorily»
The student has deeply and firmly mastered the material; consistently, competently and logically teaches it, closely connects theory with practice, freely copes with issues.	The student firmly knows the material, competently and essentially answers, does not make significant mistakes in answering questions.	The student has knowledge of the basic material, but has not mastered its details, makes mistakes, breaks the sequence in the presentation of the material.	The student does not know the program material, makes significant mistakes, is unsure of the answer.

Evaluation of solving test tasks

«perfectly»	«good»	«satisfactorily»	«unsatisfactorily»
100-91%	90-76%	75-51%	50% or less

Evaluation of the solution of a clinical situational problem

«perfectly»	«good»	«satisfactorily»	«unsatisfactorily»
The clinical diagnosis of the patient is precisely formulated and fully substantiated and the treatment plan is made.	Accurately formulated and partially substantiated clinical diagnosis of the patient, inaccuracies in the treatment plan.	There were difficulties in substantiating the clinical diagnosis, drawing up a treatment plan for the patient.	No answer to the problem is given.

Assessment of practical skills demonstration

«perfectly»	«good»	«satisfactorily»	«unsatisfactorily»
The student has mastered the practical skills provided by the program.	The student performs practical skills, but does not make fundamental mistakes.	The student made serious mistakes in the process of performing practical skills.	The student has not developed practical skills; did not form the skills provided by the program.

Final control

General evaluation system

Participation in the work during the semester / exam - 60% / 40% on a 200-point scale

Rating scales	traditional 4-point scale, multi-point (200-point) scale, ECTS rating scale
Conditions of admission to the final control	The student attended all practical classes and received at least 72 points for current performance

The maximum number of points that a student can score for the current academic activity for the semester for admission to the differentiated test is 120 points.

The minimum number of points that a student must score for the current academic activity for admission to the differentiated test is 72 points.

Final control in the discipline "Phthisiology" is carried out in the form of differentiated credit in the amount of educational material defined by the working program of the discipline and in the terms established by the working curriculum, individual curriculum of the student.

Differentiated credit is made in writing according to the schedule. The form is standardized and includes control of theoretical and practical training.

The package of tasks of differentiated test contains 50 test tasks of second level, 2 clinical situational cases.

Criteria for assessing differentiated credit

Test control	Clinical situational cases
Correct solution of the test task - 1 point (maximum number of points - 50)	«perfectly» 15 points
	«good» 10 points
	«satisfactorily» 5 points
	«unsatisfactorily» 0 points

The maximum number of points that a student can score when taking a differentiated test is 80 points.

Minimum number of points when making a differentiated test - not less than 50.

The calculation of the number of points is based on the student's score on a 4-point (national) scale during the study of the discipline, by calculating the arithmetic mean (CM), rounded to two decimal places. The resulting value is converted into points on a multi-point scale as follows:

$$x = \frac{CM \times 120}{5}$$

9. Course policy

The policy of the discipline is determined by the system of requirements for the student in the study of "Phthisiology" and is based on the principles of academic integrity. Students are explained the value of acquiring new knowledge; academic standards to be followed; why they are important; what is academic integrity, what are its values and functions; the essence and reasons for the inadmissibility of academic plagiarism; encourage applicants for higher education to independently perform educational tasks, correctly rely on sources of information in the case of borrowing ideas, statements, information.

Applicants for higher education must develop clinical thinking, fundamental and specialized knowledge, skills on the basic patterns of disease development, diagnosis and treatment.

The discipline "Phthisiology" is mandatory for students majoring in 222 "Medicine". The student is obliged to fully master the knowledge, skills, practical skills and competencies in this discipline.

Policy on adherence to the principles of academic integrity of higher education students:

- independent performance of educational tasks of current and final controls without the use of external sources of information, except as permitted by the teacher;
- independent performance of individual tasks and correct registration of references to sources of information in case of borrowing of ideas, statements, information.

Policy on adherence to the principles and norms of ethics and deontology by higher education students:

- to act from the standpoint of academic integrity, professional ethics and deontology in educational and professional situations;
- follow the rules of the internal regulations of the clinical base of the department, be tolerant, friendly and balanced in communication with students and teachers, patients, medical staff of the health care institution.

Attendance policy for higher education students:

- Attendance at all practical classes is mandatory (except in cases of absence for a good reason).

Policy of rearranging topics and working off missed classes by higher education students:

- practice of missed classes is according to the schedule of practice
- recomposition of the topic of the lesson, for which the student received a negative grade, is carried out at a convenient time for the teacher and the student.

10. Literature

Basic literature:

1. Phthysiology. nats textbook / edited by V. I. Petrenko,. - Kyiv .: VVV "Medicine", 2015. - 472 p.
2. Pulmonology and phthysiology: a textbook in 2 volumes / Ed. Yu.I.Feshchenko, V.P. Melnyk, I.G.Ilnitsky. - Kyiv, Lviv: Atlas, 2009 - 1336 p.
3. Phthysiology. Educational manual / edited by V.P. Melnik, I.G.Ilnitsky. - Kyiv - Lviv: Atlas, 2008. – 304 p.
4. Phthysiology. Textbook / Ed. acad. AND I. Tsyganenko, prof. SI. Zaitseva - X .: Fakty, 2004. 390s.
5. Savula M.M., Ladny O.Ya. Tuberculosis. Textbook. Ternopil: "UkrmedkNiga", 1999. - 323 p.
6. 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. – Kiiiv:2Print, 2017. – 88 p.
3. Phthysiology: a teaching manual. Collection of tasks for test control of knowledge / Ed. V.F. Moskalenko, V.I. Petrenko - Vinnitsa: The New Book, 2005. 296 p.
4. Tuberculosis of extrapulmonary localization / Yu.I. Feshchenko, I.G. Ilnitsky, V.M. Melnik, O.V. Panasyuk; for ed. Yu.I. Feshchenko, I.G. Ilnitsky - Kyiv: Logos, 1998. -376 p.
5. Diseases of the respiratory system. Reference book / Yu.I.Feshchenko, V.M.Melnyk, I.G.Ilnitsky. - Kyiv - Lviv: Atlas, 2008. - 497s.
6. 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.
7. Feshchenko Yu.I. Organization of control of chemo-resistant tuberculosis. Production edition. - Kyiv: Health, 2013. - 704 p.
8. Tuberculosis, HIV / AIDS: teaching. manual / R.G. Protsyuk, V.F.Moskalenko, V.I. Petrenko and others. Kyiv: Medicine, 2009. - 424 p.
9. Applied questions of phthysiology of children and adolescence: Textbook / Ed. Ilnitsky I.G., Kostyk A.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 Phthysiology and Pulmonology named after FG Yanovsky: <http://www.ifp.kiev.ua/doc>

3. Tuberculosis, pulmonary diseases, HIV infection. Ukrainian Scientific and Practical Journal
www.tubvil.com.ua
4. USAID "Strengthening TB Control in Ukraine" Website: <http://www.stbcu.com.ua>

11. Equipment, logistics and software of the discipline / course

- Work-study program of the discipline;
- Thematic plans of lectures, practical lessons and self-work of students;
- Methodical instructions for practical lessons for students;
- Indicative maps for the organization of self-work of students;
- Test and control tasks for practical lessons;
- Methodical support of the final control:
 - database of test tasks
 - list of theoretical issues submitted for final control
 - situational tasks
 - sets of educational radiographs and tomograms.

12. Additional Information

Responsible for the educational process - Alexander Nevzgod; Ph.D., Associate Professor
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There is a scientific circle at the department, the head is prof. Kostyk O.P.,
kaf_phthisiology@meduniv.lviv.ua

Practical classes are held on the basis of KNP ENT "Lviv Regional Phthisiopulmonology Clinical Medical and Diagnostic Center" (477 Green Street).

Students need to have bathrobes, hats, masks, their own stethoscopes.

Syllable stacker Alexander Nevzgod; Ph.D., Associate Professor

Chief of Department



Prof. Kostyk O.P.