



SYLABUS ON DISCIPLINE "Phthisiology"

1. General information

Name of the faculty	Medical
Educational program (industry, specialty, level of higher education, form of education)	22 Health care, 222 Medicine, second level of higher education (master's degree), full-time
Academic year	2023/2024
Name of discipline, code (e-mail on the website of Danylo Halytskyi LNMU)	Phthisiology, SU 3.1.1.4. Internal medicine, endocrinology, infectious diseases, phthisiology, clinical immunology and allergology, general practice (family medicine), palliative and hospice medicine SU 3.1.1 Individual profile course Internal medicine, SU 3.1
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)	6th
Semester (semester in which the study of the discipline is implemented)	11-12
Type of course / module compulsory / optional)	Compulsory
Teachers (names, surnames, research and development of teachers who teach the discipline, contact e-mail)	Alexandr Nevzhgoda; Ph.D., Associate Professor; sashko.nev0703@gmail.com
Erasmus yes / no (availability of discipline for students within the program Erasmus+)	No
Person responsible for	A.Nevzhgoda; Ph.D., Associate Professor

the syllabus (person to be commented on the syllabus, e-mail)	sashko.nev0703@gmail.com
Number of credits ECTS	1
Number of hours (<i>lectures / practical classes / self-work of students</i>)	30 hours (15 hours of practical lessons / 15 hours of self-work)
Language of instruction	English
Information about consultations	
Address, telephone and rules of operation of the clinical base	KNP ENT “Lviv Regional Phthisio-Pulmonology Clinical Medical and Diagnostic Center”; 79066, Lviv, 477 Green Street; (032) 236-89-00

2. Short annotation to the course

The students study the academic discipline "Phthisiology" of an individual profile course Internal medicine, based on the knowledge and skills acquired in the study of phthisiology in the 5th year; and other clinical and basic disciplines and completes the acquisition of general and professional competencies for their application in professional practice.

3. The purpose and objectives of the course

1. The purpose of teaching the discipline “Phthisiology” is 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. Learning objectives:

- to determine the risk factors for tuberculosis;
- to conduct a survey of patients to determine the symptoms that may indicate tuberculosis;
- to apply the algorithm of examination of patients with symptoms that may indicate tuberculosis at the stage of primary care and to develop the clinical route of the patient;
- to determine the options of tactical actions of the doctor depending on the data of bacterioscopic examination of sputum, X-ray examination and other diagnostic methods;
- interpret the data of microscopic, molecular genetic, bacteriological methods of detection of the causative agent of tuberculosis;
- evaluate the results of basic laboratory, radiological, instrumental methods of diagnosis and tuberculin testing;
- to carry out differential diagnosis of bronchopulmonary, intoxication and radiological syndromes in patients with symptoms that may indicate tuberculosis;
- formulate a diagnosis of tuberculosis in accordance with the current classification;
- to organize treatment of tuberculosis under direct supervision;
- to form and maintain the patient's commitment to the treatment of tuberculosis;
- prescribe standardized medical treatment for patients with tuberculosis depending on the category and determine the results of treatment;
- prescribe treatment to patients with chemoresistant tuberculosis;
- diagnose emergencies in patients with tuberculosis and provide them with emergency care;
- to carry out chemoprophylaxis of tuberculosis;
- to organize measures of administrative infection control of tuberculous infection;
- correctly use and select individual respiratory protection.

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

In accordance with the requirements of the Standard of Higher Education, the discipline ensures the acquisition of competencies by students.

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 the foreign language both orally and in writing.

GC10 – Ability to communicate in a foreign language.

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 – The ability to exercise their rights and obligations as a member of society, to realize the values of civil (free democratic) society and the need for its sustainable development, the rule of law, rights and freedoms of man and citizen in Ukraine.

GC15 – The ability to preserve and multiply moral, cultural, scientific values and achievements of society on the basis of an understanding of the history and laws of the development of the subject area, its place in the general system of knowledge about nature and society and in the development of society, technology and technology, use various types and forms of motor activity for active recreation 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 establish preliminary and clinical diagnoses of tuberculosis.

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

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 training results

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 a health care institution, outside it), including in an emergency situation and hostilities, 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. Fluent in English language, 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
<p><i>The code is created when filling the syllabus (category: Kn-knowledge, A-ability, C-competence, AR - autonomy and responsibility)</i></p>	<p><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.</i></p> <p><i>To enroll in the discipline, it is necessary to confirm the achievement of each learning outcome.</i></p>	<p style="text-align: center;">Symbol of the Program Learning Outcome Code in the Higher Education Standard</p>
<p><i>Kn-1</i> <i>A-1</i> <i>C-1</i> <i>AR-1</i></p>	<p>Know the structure of professional activity.</p> <p>Be able to carry out professional activities by updating and integrating knowledge.</p> <p>Effectively form a communication strategy for the successful implementation of professional activities.</p> <p>Be responsible for professional development, the ability to further professional training with a high level of autonomy.</p>	<p style="text-align: center;"><i>PR-1</i></p>
<p><i>Kn-2</i> <i>A-2</i></p>	<p>Know and understand fundamental and clinical biomedical sciences at a level sufficient to solve professional problems in the field of health care.</p> <p>Be able to apply knowledge of basic and clinical biomedical sciences to successfully solve professional problems in the field of health care.</p>	<p style="text-align: center;"><i>PR-2</i></p>

<i>C-2</i> <i>AR-2</i>	Effectively apply interpersonal connections using knowledge from fundamental and clinical biomedical sciences to successfully solve professional problems in the field of health 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>	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	<i>PR-7</i>

<i>AR-7</i>	laboratory and instrumental studies. Be responsible for the correct appointment of laboratory and instrumental studies, timely and correct assessment of their results.	
<i>Kn-8</i> <i>A-8</i> <i>C-8</i> <i>AR-8</i>	Know the main clinical syndromes that can determine the severity of the condition of the victim. 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. 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. 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>PR-8</i>
<i>Kn-9</i> <i>A-9</i> <i>C-9</i> <i>AR-9</i>	Have specialized knowledge of algorithms and standard TB treatment regimens. To be able to determine the principles and nature of treatment of various forms of tuberculosis. Form and convey to the patient and/or his relatives (guardians) their own conclusions about the principles and nature of treatment. Be responsible for deciding on the principles and nature of the treatment of the disease.	<i>PR-9</i>
<i>Kn-10</i> <i>A-10</i> <i>C-10</i> <i>AR-10</i>	Know the algorithms and standard schemes for determining the mode of work and rest, therapeutic nutrition for tuberculosis. Be able to determine the necessary mode of work and rest, proper nutrition of patients with tuberculosis. Form and convey to the patient and/or his relatives (guardians) conclusions about the necessary mode of work and rest, proper nutrition for tuberculosis. 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>PR-10</i>
<i>Kn-14</i> <i>A-14</i> <i>C-14</i> <i>AR-14</i>	Know the tactics of emergency medical care in emergency conditions in phthisiology. Be able to provide emergency medical care for medical emergencies in limited time settings in accordance with existing clinical protocols and treatment standards. Reasonably inform the patient and/or relatives about the need for emergency care and obtain consent for medical intervention. Be responsible for the timeliness and quality of emergency medical care.	<i>PR-14</i>
<i>Kn-17</i>	Have specialized knowledge of algorithms for performing	<i>PR-17</i>

<p><i>A-17</i> <i>C-17</i> <i>AR-17</i></p>	<p>medical manipulations. Be able to perform medical manipulations. It is substantiated to form and bring to the patient, and/or his relatives (guardians) conclusions about the need for medical manipulations. Be responsible for the quality of medical manipulation.</p>	
<p><i>Kn-19</i> <i>A-19</i> <i>C-19</i> <i>AR-19</i></p>	<p>Know the anti-epidemic and preventive measures for the 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. Inform the population about the need for prevention of tuberculosis. Be responsible for timely and high-quality TB prevention.</p>	<p><i>PR-19</i></p>
<p><i>Kn-20</i> <i>A-20</i> <i>C-20</i> <i>AR-20</i></p>	<p>Know the main epidemiological indicators of tuberculosis, the system of anti-epidemic measures of tuberculosis infection control. Be able to carry out anti-epidemic measures in the focus of tuberculous infection. 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. 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.</p>	<p><i>PR-20</i></p>
<p><i>Kn-21</i> <i>A-21</i> <i>C-21</i> <i>AR-21</i></p>	<p>Know the methodology for finding the necessary information in professional literature, Internet resources. Be able to analyze, evaluate and apply the information received. Establish interpersonal connections to search, analyze, evaluate the information received. Be responsible for the analysis and adequate assessment of the information received from professional literature, Internet resources.</p>	<p><i>PR-21</i></p>
<p><i>Kn-24</i> <i>A-24</i> <i>C-24</i> <i>AR-24</i></p>	<p>Know the basic rules of individual safety in case of typical dangerous situations in the individual field of activity. Be able to provide the necessary level of individual safety in case of typical dangerous situations. Apply interpersonal skills to ensure the required level of individual safety in the event of typical dangerous situations. Be responsible for ensuring the required level of individual safety in case of typical dangerous situations.</p>	<p><i>PR-24</i></p>
<p><i>Kn-25</i> <i>A-25</i> <i>C-25</i></p>	<p>Know the ways of conveying their own knowledge, conclusions and arguments on health issues and related issues to specialists and non-specialists. 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. Establish interpersonal links to convey their own knowledge, conclusions and arguments on health issues and related</p>	<p><i>PR-25</i></p>

<i>AR-25</i>	issues to specialists and non-specialists. 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> <i>A-27</i> <i>C-27</i> <i>AR-27</i>	Fluent in English at the level of oral and written communication. Be able to communicate fluently in English to discuss professional activities, research and projects. Establish interpersonal links for free communication in English to discuss issues of professional activity, research and projects. Be responsible for the ability to communicate fluently in English to discuss professional activities, research and projects.	<i>PR-27</i>
<i>Kn-29</i> <i>A-29</i> <i>C-29</i> <i>AR-29</i>	Know the features of specific prevention of tuberculosis (vaccination, BCG revaccination). Be able to organize and conduct specific prevention of tuberculosis. Inform the population about the need for timely specific prevention of tuberculosis. Be responsible for quality and timely vaccination, BCG revaccination.	<i>PR-29</i>

6. Course format and scope

Course format	Eye	
Kind of occupations	Number of hours	Number of groups
Practical lessons	15	
Self-work	15	

7. Topics and content of the course

Code type to topic	Topic	Learning content	Learning outcome code	Teacher
P-1	Management of patients with tuberculosis. Revealing and diagnosing of tuberculosis. Treatment drug regimens for patients with newly diagnosed tuberculosis and re-treatment.	Health standards for tuberculosis. Modern approaches to the detection and diagnosis of tuberculosis. Identification of symptoms that may indicate tuberculosis. The route of a patient with a cough at the stage of primary care. Bacteriological methods for the diagnosis of tuberculosis. The role of rapid methods of molecular genetic diagnosis of tuberculosis. Application of X-ray examination in the diagnosis of tuberculosis. The role of computed tomography and magnetic resonance imaging in the diagnosis and differential diagnosis of tuberculosis. The role of instrumental and invasive methods in confirming the diagnosis. Treatment regimens of	PR-1 PR-2 PR-3 PR-4 PR-5 PR-6 PR-7 PR-9 PR-10 PR-17 PR-21 PR-27	Nevzgodina A.A.

		patients in cases of newly diagnosed tuberculosis and cases of re-treatment. Treatment under direct supervision and formation of adherence to treatment. Clinic, diagnosis of tuberculosis during pregnancy. Features of treatment.		
P-2	Management of patients with chemoresistant tuberculosis. Treatment regimens of mono-, poly-, multi- and wide drug resistant tuberculosis. Features of management of incurable patients with tuberculosis. Application of palliative methods of treatment. Complications of pulmonary tuberculosis: hemoptysis, hemorrhage, spontaneous pneumothorax.	Determining the risk of multi-resistant tuberculosis. Timely establishment of chemoresistance. Compilation of a diagnostic algorithm with the rational use of methods of molecular genetic diagnostics and bacteriological research. Standard and individualized treatment regimens for monoresistant, polyresistant, multi-resistant tuberculosis (MRTB) and tuberculosis with extended resistance (RRTB). Diagnosis and management of adverse reactions to treatment. Surgical treatment of MRTB. Features of incurable patients with tuberculosis. Application of palliative methods of treatment. Hemoptysis and pulmonary hemorrhage in patients with tuberculosis: pathogenesis, classification, differentiation of blood flow. Types of spontaneous pneumothorax. Algorithms for providing emergency care for complications of tuberculosis.	PR-1 PR-2 PR-3 PR-4 PR-5 PR-6 PR-7 PR-8 PR-9 PR-10 PR-14 PR-17 PR-21 PR-27	Nevzgodina A.A.
P-3	Prevention of tuberculosis. Infectious control of tuberculosis. Coronavirus disease (COVID-19): clinic, diagnosis, treatment, prevention.	BCG vaccination. Chemoprophylaxis of tuberculosis, indications, methods. Sanitary prevention, its tasks. Work in the center of tuberculous infection on tuberculous prophylaxis. BCG vaccination and revaccination. Infectious control of tuberculous infection. Etiology, pathogenesis of coronavirus disease. Clinical signs depending on the course of the disease. Diagnostic standards. Risk groups for complications. Treatment of patients with COVID-19 in the outpatient and inpatient stages. Management of anti-epidemic measures in the center of SARS-CoV-2 infection.	PR-1 PR-2 PR-3 PR-4 PR-5 PR-6 PR-7 PR-8 PR-9 PR-10 PR-17 PR-19 PR-20 PR-21 PR-24 PR-27 PR-29	Nevzgodina A.A.

SW-1	Differential diagnosis of basal and paramediastinal processes, pulmonary dissemination, pulmonary infiltrates.	X-ray syndrome of expansion of the shadow of the roots of the lungs and mediastinum. Differential diagnosis of tuberculosis of intrathoracic lymph nodes, lymphogranulomatosis, non-Hodgkin's lymphoma, lymphocytic leukemia, sarcoidosis, nonspecific adenopathies, central cancer, aortic aneurysm, esophageal hyperplasia, thyroid gland. Radiological dissemination syndrome in the lungs. Differential diagnosis of disseminated tuberculosis, bilateral focal pneumonia, carcinomatosis, pneumoconiosis, sarcoidosis, congestion in the lungs, systemic connective tissue lesions, interstitial lung diseases. X-ray syndrome of partial or segmental eclipse (pulmonary infiltrate). Differential diagnosis of infiltrative pulmonary tuberculosis, pneumonia, pulmonary eosinophilic infiltrate, pulmonary infarction, lung cancer.	PR-1 PR-2 PR-3 PR-4 PR-7 PR-21	Nevzgodina A.A.
SR-2	Differential diagnosis of spherical formations in the lungs, cavities in the lungs, pleurisy.	X-ray syndrome of spherical shadow in the lungs. Differential diagnosis of pulmonary tuberculoma, peripheral cancer, tumor metastases, benign tumors, filled cysts. X-ray syndrome of the cavity in the lungs. Differential diagnosis of tuberculous cavity, lung abscess, aspergilloma, cystic hypoplasia, cavitory cancer, bronchoectatic disease. X-ray syndrome of the presence of fluid in the pleural cavity. Differential diagnosis of tuberculous, nonspecific, cancerous pleurisy, hydrothorax in cardiac decompensation, renal failure, pleural mesothelioma.	PR-1 PR-2 PR-3 PR-4 PR-7 PR-21	Nevzgodina A.A.
SW-3	Extrapulmonary forms of tuberculosis: tuberculous meningitis. Tuberculosis of the peripheral lymphatic nodes. Bone and joints tuberculosis.	Clinical variants, diagnosis, treatment of extrapulmonary forms of tuberculosis (meninges, peripheral lymph nodes, bones and joints).	PR-1 PR-2 PR-3 PR-4 PR-5 PR-6 PR-7 PR-9	Nevzgodina A.A.

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 questions.	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	The student performs practical skills, but does not make fundamental	The student made serious mistakes in the process of performing	The student has not developed practical skills; did not form the skills provided

program.

mistakes.

practical skills.

by the program.

Final control

Exam is a form of final control, consisting in assessing the student's assimilation of educational material solely on the basis of the results of performing certain types of work in practical classes. Semester credit for disciplines is held at the end of its study, before the beginning of the examination session.

Scheme of accrual and distribution of points received by students:

For disciplines the form of final control which is a test:

The maximum number of points that a student can score for the current educational activity in the study of the discipline is 200 points.

The minimum number of points that a student must score for the current academic activity to enroll in the discipline is 120 points.

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

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

9. Course policy

The policy of the discipline is determined by the system of requirements for the student in the study of "Phthysiology" 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 "Phthysiology" 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".
7. Order of the Ministry of Health of Ukraine No. 358 dated 22.02. 2222 Protocol "Provision of medical care for the treatment of coronavirus disease (COVID-19)."

Additional literature:

1. 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.
2. Diseases of the respiratory system. Reference book / Yu.I.Feshchenko, V.M.Melnyk, I.G.Ilnitsky. - Kyiv - Lviv: Atlas, 2008. – 497p.
3. Feshchenko Yu.I. Organization of control of chemo-resistant tuberculosis. Production edition. - Kyiv: Health, 2013. - 704 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 recommendations for practical lessons for students;
- Indicative maps for the organization of self-work of students;
- Test and control tasks for practical lessons;
 - base of test tasks Step-2;
 - list of theoretical questions submitted for final control
 - situational tasks
 - sets of educational radiographs and tomograms.

12. Additional Information

Responsible for the educational process - Associate Professor Chulovska Ulyana Bogdanivna, ulyana_62@ukr.net

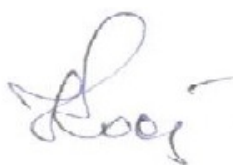
There is a scientific circle at the department, the head is prof. Kostyk Olga Petrivna, kaf_phthysiology@meduniv.lviv.ua

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

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

Syllable stacker Alexandr Nevzhgoda; Ph.D., Associate Professor

Chief of Department



Prof. Kostyk O.P.