

**MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE**

**SUMY STATE UNIVERSITY**

Academic and Research Medical Institute

Кафедра хірургії, травматології, ортопедії та фтизіатрії

**PHTYSIATRICS**

<b>Higher education level</b>	The Second
<b>Major: study programme</b>	222 Medicine: Medicine

Approved by Quality Council

Protocol dated \_\_\_\_\_ № \_\_\_\_\_

Chairman of the Quality Council

\_\_\_\_\_  
Petrashenko Viktoriia  
Oleksandrivna

## DATA ON REVIEWS AND APPROVAL

Author

Duzhyi Ihor Dmytrovych  
Oleshchenko Halyna Pavlivna

Review of the course descriptor	<hr style="border: 0; border-top: 1px solid black; margin-bottom: 5px;"/> <hr style="border: 0; border-top: 1px solid black; margin-bottom: 5px;"/>
Considered and approved at the meeting of the work group of Study programme Медицина	Protocol dated _____ № _____  Head of the work group (Head of the Study programme)  _____ Prystupa Liudmyla Nykodymivna
Considered and approved at the meeting of the Кафедра хірургії, травматології, ортопедії та фтизіатрії	Protocol dated _____ № _____  Head of the Department  _____ Duzhyi Ihor Dmytrovych

# SYLLABUS

## 1. General information on the course

<b>Full course name</b>	Phtysiatrics
<b>Full official name of a higher education institution</b>	Sumy State University
<b>Full name of a structural unit</b>	Academic and Research Medical Institute. Кафедра хірургії, травматології, ортопедії та фтизіатрії
<b>Author(s)</b>	Oleshchenko Halyna Pavlivna, Duzhyi Ihor Dmytrovych
<b>Cycle/higher education level</b>	The Second Level Of Higher Education, National Qualifications Framework Of Ukraine – The 7th Level, QF-LLL – The 7th Level, FQ-EHEA – The Second Cycle
<b>Semester</b>	1 weeks during the 9th semester
<b>Workload</b>	The volume of the discipline is 3 credits ECTS, 90 hours, of which 40 hours is contact work with the teacher (30 h. practical classes and 10 h. lectures), 50 hours - independent work of student
<b>Language(s)</b>	English

## 2. Place in the study programme

<b>Relation to curriculum</b>	Elective course available for study programme "Medicine"
<b>Prerequisites</b>	Phthiology as a discipline is based on the study of anatomy, physiology, histology, microbiology, virology and immunology, pathophysiology, pathomorphology, radiology, pharmacology, propaedeutics of internal medicine, propaedeutics of pediatrics, hygiene and ecology and integrates with these disciplines
<b>Additional requirements</b>	There are no specific requirements
<b>Restrictions</b>	There are no specific restrictions

## 3. Aims of the course

To form a system of knowledge about the classification of clinical forms of tuberculosis, diagnostic and treatment algorithm of various forms of tuberculosis and their complications, prevention of infection of others and reducing the risk of tuberculosis.

## 4. Contents

Topic 1 Epidemiology of tuberculosis. Etiology, pathogenesis of tuberculosis. Immunity in tuberculosis. Clinical classification of tuberculosis

Tuberculosis as a social, medical and scientific problem. The main stages of development of the doctrine of tuberculosis. Risk factors for tuberculosis. Pathomorphosis of tuberculosis. The causative agent of tuberculosis, morphological structure, properties. Infection with tuberculosis, ways of penetration and spread of MBT in the human body. Clinical classification of tuberculosis.

Topic 2 General approaches to the diagnosis of tuberculosis. Special methods of detection and diagnosis of tuberculosis (microbiological, X-ray diagnostics, tuberculin diagnostics)

Clinical examination of a patient with tuberculosis. Ways and methods of tuberculosis detection. Microbiological diagnosis of tuberculosis. Methods of X-ray examination of patients with tuberculosis. Population groups subject to mandatory annual fluorographic examination. Options for tactical actions for doctors of general medical network in the detection of tuberculosis. Tuberculin diagnosis

Topic 3 Specific prevention of tuberculosis, complications of BCG.

BCG and BCG-M vaccine. Complications, contraindications, technique. Vaccination calendar.

Topic 4 Focal pulmonary tuberculosis

Pathogenesis and pathomorphology, detection methods, clinic and course of focal form of tuberculosis. Reasons for the spread of multidrug-resistant pulmonary tuberculosis among the population. Causes of tuberculosis in AIDS patients.

Topic 5 Infiltrative pulmonary tuberculosis

Pathogenesis and pathomorphology, methods of detection, clinic and course of infiltrative form of tuberculosis. Clinical and radiological variants of caseous pneumonia, features of their course.

Topic 6 Disseminated and miliary pulmonary tuberculosis. Tuberculosis of the nervous system and meninges

Pathogenesis and pathomorphology of disseminated pulmonary tuberculosis. Pathogenesis and pathomorphology of miliary tuberculosis. Pathogenesis and pathomorphology of tuberculous meningitis.

Topic 7 Spherical formations in the lungs

Classification of pulmonary tuberculosis. Features of the clinical course of pulmonary tuberculosis, detection methods. Differential diagnosis of pulmonary tuberculoma with peripheral cancer, echinococcal cyst. Consequences.

Topic 8 Fibrocavernous and cirrhotic pulmonary tuberculosis

Causes of fibrocavernous pulmonary tuberculosis. Pathogenesis, pathomorphology. The main clinical syndromes, radiological signs of fibrocavernous and cirrhotic pulmonary tuberculosis.

Topic 9 Complications of secondary forms of tuberculosis: hemoptysis and pulmonary hemorrhage, spontaneous pneumothorax, pleural empyema, chronic pulmonary heart disease, amyloidosis of internal organs

Pathogenesis, clinic, diagnosis and principles of treatment of hemoptysis, pulmonary hemorrhage, spontaneous pneumothorax, chronic pulmonary heart disease and amyloidosis. Providing emergency care for pulmonary hemorrhage, spontaneous pneumothorax.

Topic 10 Tuberculous pleurisy

Pathogenesis, pathomorphology and classification of tuberculous pleurisy. The main clinical syndromes of pleurisy. Modern diagnostic methods. Indications for pleural puncture, methods of its implementation.

Topic 11 Extrapulmonary tuberculosis: tuberculosis of bones and joints, urogenital system, gastrointestinal tract, peripheral lymph nodes

Clinic of tuberculosis of bones and joints, genitourinary system, gastrointestinal tract, peripheral lymph nodes. Diagnosis. Modern treatment schemes. Pathogenesis and pathomorphology.

Topic 12 Tuberculosis of unknown location. Tuberculosis of intrathoracic lymph nodes. Primary tuberculosis complex. Features of tuberculosis in children and adolescents

Tuberculosis of unknown location. Tuberculosis of intrathoracic lymph nodes. Primary tuberculosis complex. The study of this topic involves theoretical work in the classroom, solving situational problems, work in the simulation center (work with radiographs), the use of virtual simulation (watching movies on the method of Mantoux test) with further discussion. Role games. In the absence of quarantine restrictions, work in the departments of the medical institution (according to the agreement on cooperation between the medical institution and the university) in compliance with the requirements of infection control for tuberculosis.

Topic 13 General principles of treatment of patients with tuberculosis. Antimycobacterial drugs. Standard treatment regimens for patients with tuberculosis. Features of tuberculosis in HIV-infected people.

General principles of treatment from the standpoint of evidence-based medicine. Antimycobacterial drugs. Features of diagnosis and treatment from the standpoint of evidence-based medicine in HIV-infected people. Modern treatment regimens from the standpoint of evidence-based medicine in accordance with the spectrum of resistance of the Office. General principles of antimycobacterial therapy from the standpoint of evidence-based medicine. Hygienic and dietary regime in the tuberculosis clinic. Pathogenetic treatment from the standpoint of evidence-based medicine. Immunocorrective, symptomatic and physiotherapy from the standpoint of evidence-based medicine. The main surgical methods of treatment from the standpoint of evidence-based medicine for respiratory tuberculosis. Sanatorium treatment from the standpoint of evidence-based medicine for patients with tuberculosis. Medical and social support of patients with tuberculosis. Monitoring of treatment from the standpoint of evidence-based medicine.

Topic 14 Nonspecific therapy of patients with tuberculosis. Surgical treatment. Spa treatment. Tuberculosis prevention: infection control, social, primary, secondary. Work in the center of tuberculosis infection

Determination of components of infectious control over tuberculosis. Work in the center of a tuberculosis infection. Social, sanitary, chemoprophylaxis. Sanitary and educational work. The study of this topic involves theoretical work in the classroom, solving situational problems. Role games. In the absence of quarantine restrictions, work in the departments of the medical institution (according to the agreement on cooperation between the medical institution and the university) in compliance with the requirements of infection control for tuberculosis.

Topic 15 Differential credit

## 5. Intended learning outcomes of the course

After successful study of the course, the student will be able to:

LO1	Plan a scheme of examination of a patient with tuberculosis. Identify clinical forms of tuberculosis and formulate a clinical diagnosis according to the classification
LO3	Assign and explain the importance of laboratory, radiological, instrumental, microbiological methods of tuberculin testing
LO6	To determine the treatment regimens of patients with different clinical forms of tuberculosis and to determine the criteria for their treatment
LO12	Diagnose and provide emergency care in emergencies in patients with tuberculosis
LO16	Classify the foci of tuberculosis infection and use in them the principles of infection control measures.

## 7. Teaching and learning activities

### 7.1 Types of training

#### **Topic 1. Epidemiology of tuberculosis. Etiology, pathogenesis of tuberculosis. Immunity in tuberculosis. Clinical classification of tuberculosis**

lect.1 "Determination of tuberculosis as a scientific and practical problems. History of tuberculosis. Epidemiology of tuberculosis. Etiology, pathogenesis of tuberculosis. Immunity in tuberculosis." (full-time course)

Determination of tuberculosis as a scientific and practical problems. History of tuberculosis. Epidemiology of tuberculosis. Etiology, pathogenesis of tuberculosis. Immunity in tuberculosis. Teaching is carried out in the form of multimedia lectures (in the presence of quarantine - on-line).

pr.tr.1 "Epidemiology of tuberculosis. Etiology, pathogenesis of tuberculosis. Immunity in tuberculosis. Clinical classification of tuberculosis"

Tuberculosis as a social, medical and scientific problem. The main stages of development of the doctrine of tuberculosis. Risk factors for tuberculosis. Pathomorphosis of tuberculosis. The causative agent of tuberculosis, morphological structure, properties. Tuberculosis infection, ways of penetration and spread of the MBT in the human body. Clinical classification of tuberculosis. The study of this topic involves theoretical work in the classroom, the use of virtual simulation (watching movies) with further discussion. In the absence of quarantine restrictions, work in the departments of the medical institution (according to the agreement on cooperation between the medical institution and the university) in compliance with the requirements of infection control for tuberculosis.

## **Topic 2. General approaches to the diagnosis of tuberculosis. Special methods of detection and diagnosis of tuberculosis (microbiological, X-ray diagnostics, tuberculin diagnostics)**

lect.2 "Organization of detection and diagnosis of tuberculosis"

Organization of detection and diagnosis of tuberculosis. Teaching is carried out in the form of multimedia lectures (in the presence of quarantine - on-line).

pr.tr.2 "General approaches to the diagnosis of tuberculosis. Special methods of detection and diagnosis of tuberculosis (microbiological, X-ray diagnostics, tuberculin diagnostics)"

Clinical examination of a patient with tuberculosis. Ways and methods of tuberculosis detection. Microbiological diagnosis of tuberculosis. Methods of X-ray examination of patients with tuberculosis. Population groups subject to mandatory annual fluorographic examination. Options for tactical actions for doctors of general medical network in the detection of tuberculosis. Tuberculin diagnosis. The study of this topic involves theoretical work in the classroom, solving situational problems, work in the simulation center (work with radiographs), the use of virtual simulation (watching movies on the method of collecting and examining sputum, Mantoux, bronchoscopy) with further discussion. In the absence of quarantine restrictions, work in the departments of the medical institution (according to the agreement on cooperation between the medical institution and the university) in compliance with the requirements of infection control for tuberculosis.

## **Topic 3. Specific prevention of tuberculosis, complications of BCG.**

lect.3 "Primary forms of tuberculosis. Their complications"

Primary forms of tuberculosis. Their complications. Teaching is carried out in the form of multimedia lectures (in the presence of quarantine - on-line).

pr.tr.3 "Specific prevention of tuberculosis, complications of BCG."

BCG and BCG-M vaccine. Complications, contraindications, technique. Vaccination calendar. The study of this topic involves theoretical work in the classroom, solving situational problems. Role games. In the absence of quarantine restrictions, work in the departments of the medical institution (according to the agreement on cooperation between the medical institution and the university) in compliance with the requirements of infection control for tuberculosis.

## **Topic 4. Focal pulmonary tuberculosis**

lect.4 "Secondary forms of tuberculosis. Their complications"

Secondary forms of tuberculosis. Their complications. Teaching is carried out in the form of multimedia lectures (in the presence of quarantine - on-line).

pr.tr.4 "Focal pulmonary tuberculosis"

Pathogenesis and pathomorphology, methods of detection, clinic and course of focal form of tuberculosis. Reasons for the spread of multidrug-resistant pulmonary tuberculosis among the population. Causes of tuberculosis in AIDS patients. The study of this topic involves theoretical work in the classroom, solving situational problems, work in the simulation center (work with radiographs). In the absence of quarantine restrictions, work in the departments of the medical institution (according to the agreement on cooperation between the medical institution and the university) in compliance with the requirements of infection control for tuberculosis.

**Topic 5. Infiltrative pulmonary tuberculosis**

pr.tr.5 "Infiltrative pulmonary tuberculosis"

Pathogenesis and pathomorphology, detection methods, clinic and course of infiltrative form of tuberculosis. Clinical and radiological variants of caseous pneumonia, features of their course. The study of this topic involves theoretical work in the classroom, solving situational problems, work in the simulation center (work with radiographs). In the absence of quarantine restrictions, work in the departments of the medical institution (according to the agreement on cooperation between the medical institution and the university) in compliance with the requirements of infection control for tuberculosis.

**Topic 6. Disseminated and miliary pulmonary tuberculosis. Tuberculosis of the nervous system and meninges**

pr.tr.6 "Disseminated and miliary pulmonary tuberculosis. Tuberculosis of the nervous system and meninges"

Pathogenesis and pathomorphology of disseminated pulmonary tuberculosis. Pathogenesis and pathomorphology of miliary tuberculosis. Pathogenesis and pathomorphology of tuberculous meningitis. Pathogenesis and pathomorphology of disseminated pulmonary tuberculosis. Pathogenesis and pathomorphology of miliary tuberculosis. Pathogenesis and pathomorphology of tuberculous meningitis. The study of this topic involves theoretical work in the classroom, solving situational problems, work in the simulation center (work with radiographs). In the absence of quarantine restrictions, work in the departments of the medical institution (according to the agreement on cooperation between the medical institution and the university) in compliance with the requirements of infection control for tuberculosis.

**Topic 7. Spherical formations in the lungs**

pr.tr.7 "Spherical formations in the lungs"

Classification of pulmonary tuberculosis. Features of the clinical course of pulmonary tuberculosis, detection methods. Differential diagnosis of pulmonary tuberculoma with peripheral cancer, echinococcal cyst. Consequences. The study of this topic involves theoretical work in the classroom, solving situational problems, work in the simulation center (work with radiographs). In the absence of quarantine restrictions, work in the departments of the medical institution (according to the agreement on cooperation between the medical institution and the university) in compliance with the requirements of infection control for tuberculosis.



**Topic 8. Fibrocavernous and cirrhotic pulmonary tuberculosis**

pr.tr.8 "Fibrocavernous and cirrhotic pulmonary tuberculosis"

Causes of fibrocavernous pulmonary tuberculosis. Pathogenesis, pathomorphology. The main clinical syndromes, radiological signs of fibrocavernous and cirrhotic pulmonary tuberculosis. Clinic of tuberculosis of bones and joints, genitourinary system, gastrointestinal tract, peripheral lymph nodes. Diagnosis. Modern treatment schemes from the standpoint of evidence-based medicine. Pathogenesis and pathomorphology. The study of this topic involves theoretical work in the classroom, solving situational problems, work in the simulation center (work with radiographs, computed tomograms). In the absence of quarantine restrictions, work in the departments of the medical institution (according to the agreement on cooperation between the medical institution and the university) in compliance with the requirements of infection control for tuberculosis.

**Topic 9. Complications of secondary forms of tuberculosis: hemoptysis and pulmonary hemorrhage, spontaneous pneumothorax, pleural empyema, chronic pulmonary heart disease, amyloidosis of internal organs**

pr.tr.9 "Complications of secondary forms of tuberculosis: hemoptysis and pulmonary hemorrhage, spontaneous pneumothorax, pleural empyema, chronic pulmonary heart disease, amyloidosis of internal organs"

Pathogenesis, clinic, diagnosis and principles of treatment from the standpoint of evidence-based medicine of hemoptysis, pulmonary hemorrhage, spontaneous pneumothorax, chronic pulmonary heart disease and amyloidosis. Providing emergency care for pulmonary hemorrhage, spontaneous pneumothorax from the standpoint of evidence-based medicine. The study of this topic involves theoretical work in the classroom, solving situational problems. Role games. In the absence of quarantine restrictions, work in the departments of the medical institution (according to the agreement on cooperation between the medical institution and the university) in compliance with the requirements of infection control for tuberculosis.

**Topic 10. Tuberculous pleurisy**

pr.tr.10 "Tuberculous pleurisy"

Pathogenesis, pathomorphology and classification of tuberculous pleurisy. The main clinical syndromes of pleurisy. Modern diagnostic methods. Indications for pleural puncture, methods of its implementation. The study of this topic involves theoretical work in the classroom, solving situational problems, work in the simulation center (work with radiographs, computed tomograms). In the absence of quarantine restrictions, work in the departments of the medical institution (according to the agreement on cooperation between the medical institution and the university) in compliance with the requirements of infection control for tuberculosis. Thoracoscopy.

**Topic 11. Extrapulmonary tuberculosis: tuberculosis of bones and joints, urogenital system, gastrointestinal tract, peripheral lymph nodes**

pr.tr.11 "Extrapulmonary tuberculosis: tuberculosis of bones and joints, urogenital system, gastrointestinal tract, peripheral lymph nodes"

Clinic of tuberculosis of bones and joints. Diagnosis. Modern treatment schemes. Pathogenesis and pathomorphology of tuberculous meningitis. The study of this topic involves theoretical work in the classroom, solving situational problems. Role games. In the absence of quarantine restrictions, work in the departments of the medical institution (according to the agreement on cooperation between the medical institution and the university) in compliance with the requirements of infection control for tuberculosis.

**Topic 12. Tuberculosis of unknown location. Tuberculosis of intrathoracic lymph nodes. Primary tuberculosis complex. Features of tuberculosis in children and adolescents**

pr.tr.12 "Tuberculosis of unknown location. Tuberculosis of intrathoracic lymph nodes. Primary tuberculosis complex. Features of tuberculosis in children and adolescents"

Tuberculosis of unknown location. Tuberculosis of intrathoracic lymph nodes. Primary tuberculosis complex. The study of this topic involves theoretical work in the classroom, solving situational problems, work in the simulation center (work with radiographs), the use of virtual simulation (watching movies on the method of Mantoux test) with further discussion. Role games. In the absence of quarantine restrictions, work in the departments of the medical institution (according to the agreement on cooperation between the medical institution and the university) in compliance with the requirements of infection control for tuberculosis.

**Topic 13. General principles of treatment of patients with tuberculosis. Antimycobacterial drugs. Standard treatment regimens for patients with tuberculosis. Features of tuberculosis in HIV-infected people.**

lect.5 "General principles and methods of treatment of patients with tuberculosis. Tuberculosis prevention. Work in the center of tuberculosis infection"

General principles and methods of treatment of patients with tuberculosis on the basis of evidence-based medicine. Tuberculosis prevention. Work in the center of tuberculosis infection. Teaching is carried out in the form of multimedia lectures (in the presence of quarantine - on-line).

pr.tr.13 "General principles of treatment of patients with tuberculosis. Antimycobacterial drugs. Standard treatment regimens for patients with tuberculosis. Features of tuberculosis in HIV-infected people."

Levels of care for TB facilities. Tasks of the anti-tuberculosis dispensary, methods and organization of its work. Participation of health professionals in the detection of tuberculosis. General principles of antimycobacterial therapy on the basis of evidence-based medicine.

**Topic 14. Nonspecific therapy of patients with tuberculosis. Surgical treatment. Spa treatment. Tuberculosis prevention: infection control, social, primary, secondary. Work in the center of tuberculosis infection**

pr.tr.14 "Nonspecific therapy of patients with tuberculosis. Surgical treatment. Spa treatment. Tuberculosis prevention: infection control, social, primary, secondary. Work in the center of tuberculosis infection"

Hygienic and dietary regime in the tuberculosis clinic. Pathogenetic, immunocorrective, symptomatic, physiotherapy based on evidence-based medicine. The main surgical methods of treatment for respiratory tuberculosis on the basis of evidence-based medicine. Sanatorium treatment of patients with tuberculosis on the basis of evidence-based medicine. Medical and social support of patients with tuberculosis. Treatment monitoring. Determination of components of infectious control over tuberculosis. Work in the center of a tuberculosis infection. Social prevention. Chemoprophylaxis of tuberculosis, indications, methods. Sanitary prevention, its tasks. Sanitary and educational work.

### **Topic 15. Differential credit**

pr.tr.15 "Differential credit"

Answer 5 questions and testing

## 7.2 Learning activities

LA1	Self-study
LA2	E-learning in systems (MIX SSU, Lectur.ED, Google Meet)
LA3	Practical work with the patient in the specialized departments of the hospital
LA4	Preparing for Step 2
LA5	Preparation for the final control
LA6	Analysis of clinical cases
LA7	Interpretation of laboratory (clinical analysis of blood, urine, biochemical analysis of blood, mycobacteriological examination of sputum, tuberculin testing, etc.) and instrumental (ultrasound, CT, radiography, bronchoscopy, thoracoscopy, etc.) methods of examination
LA8	Preparation for practical classes
LA9	Watching educational films
LA10	Individual research project (student research paper, article, thesis, etc.)
LA11	Work with textbooks and relevant information sources
LA12	Practice of practical skills in the simulation center

## 8. Teaching methods

Course involves learning through:

TM1	Role-playing game
TM2	Case-based learning (CBL). Learning based on the analysis of a clinical case, situation
TM3	Team-based learning (TBL). Командно-орієнтоване навчання

TM4	Educational discussion / debate
TM5	Interactive lectures
TM6	Research-based learning (RBL). Learning through research

The discipline is taught using modern teaching methods (CBL, TBL, RBL), which not only promote the development of professional skills, but also stimulate creative and scientific activity and aimed at training practice-oriented specialists.

The discipline provides students with the following soft skills: GC 1. Ability to abstract thinking, analysis, and synthesis. GC 2. Ability to learn, master modern knowledge, and apply the knowledge in practice. GC 3. Knowledge and understanding of the subject area and professional activity comprehension. GC 4. Ability to adapt and act in a new situation. GC 5. Ability to make reasoned decisions; teamwork ability; interpersonal skills. GC 7. Ability to use information and communication technologies. GC 8. Determination and persistence on the tasks and commitments undertaken.

## 9. Methods and criteria for assessment

### 9.1. Assessment criteria

Definition	National scale	Rating scale
Outstanding performance without errors	5 (Excellent)	$170 \leq RD \leq 200$
Above the average standard but with minor errors	4 (Good)	$140 \leq RD < 169$
Fair but with significant shortcomings	3 (Satisfactory)	$120 \leq RD < 139$
Fail – some more work required before the credit can be awarded	2 (Fail)	$0 \leq RD < 119$

### 9.2 Formative assessment

FA1	Peer assessment
FA2	Testing
FA3	Defense of an individual research project (speech at a conference, competition of scientific works)
FA4	Teacher's instructions in the process of performing practical tasks
FA5	Interviews and oral comments of the teacher on his results
FA6	Checking and evaluating written assignments
FA7	Solving clinical cases

### 9.3 Summative assessment

SA1	Evaluation of written works, surveys, solving a clinical case
SA2	Differential credit
SA3	Defense of an individual research project (incentive activities, additional points)

Form of assessment:

<b>The semester of teaching</b>		<b>200 scores</b>
SA1. Evaluation of written works, surveys, solving a clinical case		<b>120</b>
		120
SA2. Differential credit		<b>80</b>
	Answer to theoretical questions (5x10)	50
	Testing	30

Form of assessment (special cases):

<b>The semester of teaching</b>		<b>200 scores</b>
SA1. Evaluation of written works, surveys, solving a clinical case		<b>120</b>
	In case of quarantine restrictions, evaluation of written works, surveys, clinical case solving are carried out remotely using the platform Mix.sumdu.edu.ua, Zoom, Google meet.	120
SA2. Differential credit		<b>80</b>
	In case of quarantine restrictions, the differential test is carried out remotely using the platform Mix.sumdu.edu.ua, Zoom, Google meet.	80

The highest number of points based on the results of the current and final tests that a student can receive is 200 points. Assessment of current student performance is carried out at each practical lesson on a four-point scale ("5", "4", "3", "2") and is entered in the journal of academic performance. Scores set according to the traditional scale are converted into points according to the scale of conversion of traditional scores (average score to the nearest hundredth) into rating points. The maximum number of points that a student can score for current activities - 120. The minimum current number of points that a student must score in the study of all practical classes in the discipline - 72 points, which corresponds to the average score for current performance "3". Students who have completed all types of planned educational work, worked out all missed classes by the deadline are allowed to the final modular control. In case of insufficient number of points for current classes, students have the opportunity to enter the test by preparing for the main questions of the discipline (list of questions on the site or from the teacher) and pass "Admission" to the module by answering 3 random questions from the above list. For the final modular control the student can get a maximum of 40% of the total number of points - 80, of which 20 points for testing 60 points for an oral answer (5 questions in one ticket). Incentive points are added to the assessment of the discipline for implementation of an individual research project (defense of student science work 12 points, speech at the conference 5 points, poster presentation at the conference 4 points, thesis reports 3 points).

## 10. Learning resources

### 10.1 Material and technical support

MTS1	Information and communication systems
MTS2	Library funds, archive of radiographs, spiograms, electrocardiograms, computer tomograms, results of laboratory methods of examination, tuberculin diagnostics, microbiological examination

MTS3	Computers, computer systems and networks
MTS4	Simulation center (rigid bronchoscope and collection of bronchial foreign bodies)
MTS5	Regional Clinical Phthisiopulmonology Medical Center
MTS6	Multimedia, video and sound reproduction, projection equipment (video cameras, laptops)
MTS7	Software (to support distance learning)
MTS8	Medical equipment (spirometer, electrocardiograph, bronchoscope, phonendoscope, etc.)

## 10.2 Information and methodical support

<b>Essential Reading</b>	
1	Phthisiology [Текст] : textbook / V. I. Petrenko, O. K. Asmolov, M. G. Boyko etc. ; Ed. V.I. Petrenko. — second edition. — K. : AUS Medicine Publishing, 2018. — 416 p.
2	Methodical instructions «Diagnosis of pleural diseases and pleural effusion syndrome» / compiled by I. D. Duzhyi, G. P. Oleshchenko, O. M. Lytvynenko, S. M. Kobyletskyi. – Sumy: Sumy State University, 2021. – 29 p.
<b>Supplemental Reading</b>	
1	Oleshchenko, G. P. 4914 Test tasks in phthisiology for the licensed integrated exam "Step-2" [Текст] : for 5th and 6th year students in specialty 222 "Medicine" / G. P. Oleshchenko. — Sumy : Sumy State University, 2020. — 36 p.
2	Handbook of Global Tuberculosis Control : Practices and Challenges / edited by Yichen Lu, Lixia Wang, Hongjin Duanmu, Chris Chanyasulkit, Amie J. Strong, Hui Zhang. — 1st ed. 2017. — New York, NY : Springer US, 2017. — XXII, 558
3	Handbook of Tuberculosis / edited by Jacques H. Grosset, Richard E. Chaisson. — 1st ed. 2017. — Cham : Springer International Publishing, 2017. — XVII, 221 p. 6 illus., 5 illus. in color.
4	Tuberculosis of the Central Nervous System : Pathogenesis, Imaging, and Management / edited by Mehmet Turgut, Ali Akhaddar, Ahmet T. Turgut, Ravindra K. Garg. — 1st ed. 2017. — Cham : Springer International Publishing, 2017. — X,
5	Igor D. Duzhyi, Halyna P. Oleshchenko, Ivan A. Hnatenko, Stanislav O. Holubnychyi. Particular qualities of the proteolytic system in patients with tuberculosis depending on the sensitivity of the pathogen. Wiadomosci Lekarskie. 2021;74(1):94-97
<b>Web-based and electronic resources</b>	
1	National Resource Center for Tuberculosis <a href="http://tb.ucdc.gov.ua/">http://tb.ucdc.gov.ua/</a>
2	Website of the Center for Public Health of the Ministry of Health of Ukraine <a href="http://phc.org.ua/">http://phc.org.ua/</a>
3	The issue of tuberculosis on the WHO website <a href="http://www.who.int/tb/en/">http://www.who.int/tb/en/</a> ; <a href="http://www.who.int/tb/ru/">http://www.who.int/tb/ru/</a> .


4	Website of the National Institute of Tuberculosis and Pulmonology by F.G. Yanovsky of National Academy of Medical Sciences of Ukraine <a href="http://www.ifp.kiev.ua/index_ukr.htm">http://www.ifp.kiev.ua/index_ukr.htm</a>
5	Department of Surgery, Traumatology, Orthopedics and Phthisiology, SSU <a href="http://gensurgery.med.sumdu.edu.ua">http://gensurgery.med.sumdu.edu.ua</a>

## COURSE DESCRIPTOR

№	Topic	Total, hours	Lectures, hours	Workshops (seminars), hours	Labs, hours	Self-study of the material, hours	Individual tasks, hours
<b>full-time course form of study</b>							
1	Epidemiology of tuberculosis. Etiology, pathogenesis of tuberculosis. Immunity in tuberculosis. Clinical classification of tuberculosis	6	2	2	0	2	0
2	General approaches to the diagnosis of tuberculosis. Special methods of detection and diagnosis of tuberculosis (microbiological, X-ray diagnostics, tuberculin diagnostics)	8	2	2	0	4	0
3	Specific prevention of tuberculosis, complications of BCG.	6	2	2	0	2	0
4	Focal pulmonary tuberculosis	6	2	2	0	2	0
5	Infiltrative pulmonary tuberculosis	4	0	2	0	2	0
6	Disseminated and miliary pulmonary tuberculosis. Tuberculosis of the nervous system and meninges	4	0	2	0	2	0
7	Spherical formations in the lungs	4	0	2	0	2	0
8	Fibrocavernous and cirrhotic pulmonary tuberculosis	4	0	2	0	2	0
9	Complications of secondary forms of tuberculosis: hemoptysis and pulmonary hemorrhage, spontaneous pneumothorax, pleural empyema, chronic pulmonary heart disease, amyloidosis of internal organs	8	0	2	0	6	0
10	Tuberculous pleurisy	8	0	2	0	6	0
11	Extrapulmonary tuberculosis: tuberculosis of bones and joints, urogenital system, gastrointestinal tract, peripheral lymph nodes	6	0	2	0	4	0
12	Tuberculosis of unknown location. Tuberculosis of intrathoracic lymph nodes. Primary tuberculosis complex. Features of tuberculosis in children and adolescents	8	0	2	0	6	0
13	General principles of treatment of patients with tuberculosis. Antimycobacterial drugs. Standard treatment regimens for patients with tuberculosis. Features of tuberculosis in HIV-infected people.	8	2	2	0	4	0
14	Nonspecific therapy of patients with tuberculosis. Surgical treatment. Spa treatment. Tuberculosis prevention: infection control, social, primary, secondary. Work in the center of tuberculosis infection	6	0	2	0	4	0



№	Topic	Total, hours	Lectures, hours	Workshops (seminars), hours	Labs, hours	Self-study of the material, hours	Individual tasks, hours
15	Differential credit	4	0	2	0	2	0
<i>Total (full-time course form of study)</i>		<i>90</i>	<i>10</i>	<i>30</i>	<i>0</i>	<i>50</i>	<i>0</i>

	<p><b>UNIVERSITY POLICIES FOR THE COURSE</b>  <b>«Phthysiatrics»</b></p> <p><b>Higher education level</b> The Second Level Of Higher Education, National Qualifications Framework Of Ukraine – The 7th Level, QF-LLL – The 7th Level, FQ-EHEA – The Second Cycle  <b>Major: Educational programme</b> 222 Medicine: Medicine  <b>Year of study</b> 2022  <b>Semester</b> one semester  <b>Mode of study</b> full-time course  <b>Language of instruction</b> English</p>
<b>Teacher(s)</b>	Oleshchenko Halyna Pavlivna, Duzhyi Ihor Dmytrovych
<b>Contact</b>	Oleshchenko Halyna Pavlivna g.oleschenko@med.sumdu.edu.ua
<b>Time and room for giving consultations</b>	Practices are held every Thursday from 15.00 and by agreement with the teacher on the basis of the department (dispensary department of KNP SOR "Regional Clinical Phthisiopulmonology Medical Center", Sumy, 15 Perekopskaya Street).
<b>Links to online educational platforms</b>	<a href="https://elearning.sumdu.edu.ua/works/2745/nodes/498297">https://elearning.sumdu.edu.ua/works/2745/nodes/498297</a>
<b>Syllabus</b>	<a href="https://pg.cabinet.sumdu.edu.ua/report/syllabus/39eb07b0a5a7aeda74d4abdb813c7ea22227260">https://pg.cabinet.sumdu.edu.ua/report/syllabus/39eb07b0a5a7aeda74d4abdb813c7ea22227260</a>
<b>Channels for maintaining contact with the group for receiving and working on materials</b>	personal account, MIX SSU, group in Viber
<b>POLICIES</b>	
<b>Attendance policy</b>	The student must attend all practical classes and at least 60% of lectures. Students who have completed all missed practical classes and 60% of lectures by the deadline are admitted to the final module control. Lectures are conducted by writing an abstract on the topic of the missed lecture (handwritten version, not less than 10 pages) and defending the abstract to the teacher who gave the lecture, or the head of the department.

<p><b>Assessment policy</b></p>	<p>The highest number of points based on the results of the current and final tests that a student can receive is 200 points. Assessment of current student performance is carried out at each practical lesson on a four-point scale ("5", "4", "3", "2") and is entered in the journal of academic performance. Scores set according to the traditional scale are converted into points according to the scale of conversion of traditional scores (average score to the nearest hundredth) into rating points. The maximum number of points that a student can score for current activities - 120. The minimum current number of points that a student must score in the study of all practical classes in the discipline - 72 points, which corresponds to the average score for current performance "3". Students who have completed all types of planned educational work, worked out all missed classes by the deadline are allowed to the final modular control. In case of insufficient number of points for current classes, students have the opportunity to enter the test by preparing for the main questions of the discipline (list of questions on the site or from the teacher) and pass the "Admission" to the module by answering 3 random questions from the above list. For the final modular control the student can get a maximum of 40% of the total number of points - 80, of which 20 points for testing 60 points for an oral answer (5 questions in one ticket).</p>
<p><b>Deadlines and course retake policy</b></p>	<p>In case of insufficient number of points for current classes, students have the opportunity to enter the test by preparing for the main questions of the discipline (list of questions on the site or from the teacher) and pass the "Admission" to the module by answering 3 random questions from the above list. The student has only 3 attempts to pass the "Admission" with an interval of preparation of at least two days. Thus the third (last) attempt of "Admission" is carried out only in the presence of the head of department. In case the student received an unsatisfactory grade for the module control, he must retake it at the 19th week in the form of testing. The maximum grade that a student can receive for module control is "3". The grade from the discipline, which the student receives in the 19th week after the re-examination of the module control, is defined as the sum of points for the current performance and 48 points for the module control. If the student did not reschedule the differential credit in the 19th week - the second reschedule is conducted in the form of testing in the presence of the commission. The maximum grade that a student can receive for modular control is "3". After the second re-addition of differential credit, all current points received by the student in the discipline are canceled. The total grade for the discipline that a student can receive after the 3rd re-examination of the module control can not be more than "3", which corresponds to 120 points. The student must reschedule the differential credit by the beginning of the next semester.</p>

<p><b>Assessment appeals policy</b></p>	<p>The results of the module and semester assessment are subject to appeal. A student must lodge an appeal to the director/dean on the day of certification or after announcing the results, but no later than the next working day. The appeal commission is established by the director/dean's order. The appeal commission's decision may change the grade in case of violations revealed during the attestation.</p>
<p><b>Academic integrity policy</b></p>	<p>Participants must complete all tasks according to the course requirements independently. Participants are not allowed to cheat during the written module or summative test. The assignments should not contain plagiarism, facts of fabrication, falsification, cheating. Manifestations of other types of academic dishonesty determined by the Academic Integrity policy are also unacceptable. If a teacher reveals violations of academic integrity by students during the course, the former have the right to take one of the following actions: - to reduce points by up to 40% for practical assignments; - to give recommendations for improving and resubmitting mandatory homework assignments with the reduction of points by up to 25%; - to not accept mandatory homework assignments without the right to resubmit; - set a date for retaking the written module or the summative test with a reduction of points by up to 15%; - to not allow to retake the written module or the summative test.</p>

**Alignment of learning outcomes with teaching and learning activities and assessment**

Learning outcomes	Types of training	Learning activities	Teaching methods	Material and technical support	Methods and criteria for assessment
LO1	lect.1, pr.tr.1, pr.tr.15	LA1, LA2, LA8, LA11	TM1, TM4, TM5, TM6	MTS1, MTS3, MTS5, MTS6	SA1, SA2, SA3
LO3	lect.2-lect.4, pr.tr.10-pr.tr.12, pr.tr.15, pr.tr.2-pr.tr.8	LA1, LA2, LA3, LA4, LA5, LA6, LA7, LA12	TM1, TM2, TM3, TM4, TM5, TM6	MTS1, MTS2, MTS3, MTS4, MTS5, MTS6, MTS7, MTS8	SA1, SA2
LO6	lect.5, pr.tr.13-pr.tr.15	LA1, LA3, LA4, LA5, LA6, LA8, LA9, LA10, LA12	TM1, TM2, TM3, TM4, TM5, TM6	MTS1, MTS2, MTS3, MTS6, MTS7, MTS8	SA1, SA2, SA3
LO12	pr.tr.15, pr.tr.9	LA6, LA8, LA9, LA11	TM2, TM3, TM4	MTS2, MTS3, MTS4	SA1, SA2
LO16	pr.tr.14-pr.tr.15	LA1, LA2, LA3, LA4, LA5, LA6, LA7, LA10, LA11	TM2, TM3, TM4, TM6	MTS1, MTS2, MTS3, MTS5, MTS6	SA1, SA2, SA3