

MEDICAL UNIVERSITY – PLOVDIV
FACULTY OF MEDICINE

SYLLABUS

IN

PULMONOLOGY AND PHTISIATRICS
FOR MEDICAL STUDENTS

Approved by the Department Council on 06.07.2022

Confirmed by the Faculty Council - Protocol №7/13.07.2022

**PULMONOLOGY AND PHTISIATRICS TRAINING CURRICULUM
FOR MEDICAL STUDENTS**

Discipline	Final exam/ semester	Auditorium classes				ECTS non-auditorium classes	ECTS total	Academic hours in years and semesters	
		Total	Lectures	Practices	ECTS			1 st year	
								I	II
Pulmonology and Phtisiatrics	VIII	60	20	40	10.0	5.3	15.3*	2/4	2/4

*As per the whole module Internal Diseases Part I

DISCIPLINE: PULMONOLOGY AND PHTISIATRICS

TYPE OF DISCIPLINE ACCORDING TO THE UNIFORM STATE

REQUIREMENTS: CORE MEDICAL COURSE

LEVEL OF QUALIFICATION: MASTER OF SCIENCE

FORMS OF TRAINING: postgraduate formal lectures, practice skill training, self-directed learning

YEAR OF TRAINING: Fourth year medical students, VII and VIII semester.

DURATION OF TRAINING: 10 weeks

ACADEMIC HOURS: 2 academic hours per week lectures, 4 academic hours per week practical training

TECHNICAL EQUIPMENT APPLIED IN THE TRAINING: multimedia presentations, case scenario discussions, clinical skills training as history taking and physical examination, basics in pulmonary X-ray imaging and interpretation, introduction to medical documentation, attendance of bronchoscopy procedures functional testing and thoracentesis, topic presentations.

FORMS OF EVALUATION: written and oral examination, teaching observation, clinical evaluation practices, topic presentations

EVALUATION CRITERIA: integrated assessment of trainees' progression based on their average performance during the semester

ASPECTS OF EVALUATION CRITERIA: discussion participation, cases scenario discussions, topic presentations, chest X-ray interpretation, clinical quiz taking.

SEMESTER EXAM: practical and theoretical examination as part of the integral internal medicine exam.

STATE EXAM: practical and theoretical examination as part of the integral internal medicine exam

LECTURER: PhD level supervisor from Pulmonology and Phthisiatrics Section

DEPARTMENT: First Internal Medicine Department

ANNOTATION

BASIC AIMS OF THE DISCIPLINE: Pulmonology and Phthisiatrics discipline is focused on lung diseases – their etiology, pathogenesis, clinical features, diagnosis, and treatment

Program content and objectives:

- Acquisition of theoretical and practical competencies in the field of lung structure and function as well as in the area of related lung disorders, their diagnosis, differential diagnosis, treatment, and prophylaxis.
- Development of clinical skills in the area of internal medicine conditions, with a focus on lung pathology
- Relating clinical knowledge to radiology and x-ray imaging, analysis of biochemical, microbiological, cytological, and morphological tests.
- Acquisition of knowledge and performance of manipulations specific to pulmonology as: tuberculin skin test, routine functional testing, bronchodilation tests, nebulization

- Acquisition of theoretical knowledge and practical skills of the clinical features, diagnosis, treatment and prophylaxis of lung disorders, history taking and physical examination.

EXPECTED RESULTS:

Upon completion of training, trainees are required to have knowledge and practical skills in:

- epidemiology, etiology, pathogenesis, and histopathology of the basic lung disorders
- to be familiar with the harmful effect of smoking and the methods of smoking cessation
- to have knowledge of the clinical features and diagnostic methods of basic lung disorders
- to be able to differentiate among the basic lung disorders as well as distinguish them from disorders of other organs, presenting with similar clinical features
- to be able to perform the tuberculin skin test
- to be able to perform routine functional testing and interpret their basic parameters
- to be able to perform nebulization
- to be able to recognize and interpret the X-ray features of the main lung conditions
- to be familiar with blood – gas analysis
- to be familiar with the basic therapeutic agents in pulmonology and phthisiatrics
- to have knowledge and be able to recommend preventive measures and prophylaxis in the area of lung disorders

LECTURES:

LECTURE COURSE – ESSENTIAL AREAS OF TRAINING

Lecture 1 – 2 hours

TUBERCULOSIS

1. Epidemiology
2. Etiology
3. Pathogenesis
4. Classification
5. Assessment methods
6. Clinical forms
7. Present trends in the clinical course of tuberculosis

Lecture 2 – 2 hours

TREATMENT AND PROPHYLAXIS OF TUBERCULOSIS

1. Current treatment of tuberculosis
 - 1.1. DOTS strategy
 - 1.2. First line anti-tuberculosis agents
 - 1.3. Second line anti-tuberculosis agents
2. Latent tuberculosis and prophylaxis of tuberculosis

Lecture 3 – 2 hours

PNEUMONIAS

1. Epidemiology
2. Etiology
3. Pathogenesis
4. Classification
5. Assessment methods
6. Differential diagnosis
7. Treatment of pneumonias

Lecture 4 – 2 hours

FUNCTIONAL LUNG TESTING

1. Spirometry
2. Diffusion
3. Blood- gas analysis

Lecture 5 – 2 hours

COPD

1. Epidemiology
2. Etiology

3. Pathogenesis
4. Classification
5. Assessment methods
6. Differential diagnosis
7. Treatment of COPD

Lecture 6 – 2 hours

BRONCHIAL ASTHMA

- 1 Epidemiology
- 2 Etiology
- 3 Pathogenesis
- 4 Classification
- 5 Assessment methods
- 6 Differential diagnosis
- 7 Treatment of asthma

Lecture 7 – 2 hours

SMOKING CESSATION STRATEGIES

1. Epidemiology of smoking
2. Smoking cessation strategies

Lecture 8 – 2 hours

LUNG CANCER

- 1 Epidemiology
- 2 Etiology
- 3 Pathogenesis
- 4 Classification
- 5 Assessment methods
- 6 Differential diagnosis
- 7 Treatment of pneumonias

Lecture 9 – 2 hours

PULMONARY EMBOLISM

1. Epidemiology
2. Etiology
3. Pathogenesis
4. Classification
5. Assessment methods
6. Diagnostic algorithm
7. Differential diagnosis
8. Treatment algorithm

Lecture 10 – 2 hours

PLEURAL EFFUSIONS

- 1 Epidemiology
- 2 Etiology
- 3 Pathogenesis
- 4 Classification
- 5 Assessment methods
- 6 Differential diagnosis
- 7 Treatment

PRACTICES:

Practical Sessions

Session 1 – 2 hours

Diagnostic methods in patients with tuberculosis – part 1

1. History taking
2. Physical examination
3. Imaging techniques
4. Microbiological methods

Session 2 – 2 hours

Diagnostic methods in patients with tuberculosis – part 2

1. Immunological methods
2. Clinical and laboratory methods
3. Invasive diagnostic procedures

Session 3 – 2 hours

Forms of primary tuberculosis

1. Primary tuberculosis complex
2. Tuberculous broncho adenitis

Session 4 – 2 hours

Hematogenous disseminated tuberculosis

1. Acute miliary tuberculosis
2. Subacute hematogenous disseminated tuberculosis
3. Chronic hematogenous disseminated tuberculosis

Session 5 – 2 hours

Secondary lung tuberculosis - part 1

1. Focal tuberculosis
2. Infiltrative pulmonary tuberculosis

Session 6 – 2 hours

Secondary lung tuberculosis- part 2

1. Tuberculoma of the lungs
2. Cavernous tuberculosis
3. Fibrous- cavernous tuberculosis
4. Differential diagnosis with pulmonary abscess

Session 7 – 2 hours

Complication in pulmonary tuberculosis

1. Hemoptysis
2. Pneumothorax
3. Treatment of tuberculosis

Session 8 – 2 hours

Treatment and prophylaxis of tuberculosis

1. DOTS strategy
2. Treatment of latent tuberculosis
3. BCG vaccination

Session 9 – 2 hours

Pleural effusions

1. Diagnosis of pleural effusions
2. Case scenario discussion
3. Thoracentesis attendance

Sessions 10 – 2 hours

Tuberculosis competence assessment

Session 11 – 2 hours

Basic methods of assessment in pulmonology

1. History taking
2. Physical examination
3. Imaging techniques
4. Microbiological methods
5. Immunological methods
6. Clinical and laboratory methods
7. Invasive diagnostic methods
8. Pulmonary function testing
10. Other methods

Session 12 – 2 hours

Pneumonias - part 1

1. Classification, diagnosis and differential diagnosis of pneumonias
2. Case scenarios

Session 13 – 2 hours

Pneumonias - part 2

- 1 Treatment of community acquired pneumonias
- 2 Treatment of hospital acquired pneumonias
- 3 Case scenarios

Session 13 – 2 hours

Bronchial asthma

1. Classification, diagnosis, differential diagnosis
2. Case scenarios
3. Attendance of nebulization procedures

Session 15 – 2 hours

Bronchial asthma – treatment

1. Basic groups of therapeutic agents in Asthma
2. Treatment of asthma attacks
3. Treatment of stable asthma

Session 16 – 2 hours

COPD

1. Diagnosis and severity assessment
2. Exacerbations
3. Differential diagnosis of broncho obstructive disorders
4. Case scenarios

Session 17 – 2 hours

COPD – treatment

1. Basic groups of therapeutic agents in COPD
2. Treatment of stable COPD
3. Treatment of exacerbations
4. Respiratory failure

Session 18 – 2 hours

Lung cancer

1. Diagnosis of lung cancer

2. Case scenarios
3. Bronchoscopy attendance

Session 19 – 2 hours

Pulmonary embolism

1. Risk factors, diagnosis, differential diagnosis
2. Treatment of PE
3. Prophylaxis
4. Case scenarios

Session 20 – 2 hours

Competence assessment in pulmonology

BIBLIOGRAPHY:

Pulmonary Diseases, Textbook in Internal Medicine. Editor Prof. F. Nikolov, Medicine Publishing House VAP, Plovdiv, 2017, ISBN 978-954-8326-68-1

New Manual for Pulmonary Diseases and Tuberculosis. Editor Pof. Iankova, Sofia, 2012, ISBN 978-954-9318-16-6

Dyspnea. Pathophysiology, Nosology, Diagnostics and Treatment Approach. Editors Prof. S. Kostianev, Prof. Iluchev

Global Initiative for Asthma Management and Prevention in Adults and Children under 5 Years. (GINA), Global Strategy for the Diagnosis, Management and Prevention of COPD (COLD), Guidelines for Treatment of Pneumonias and Pulmonary Embolism

Bulgarian Consensus Treatment of Pulmonary Embolism

Bulgarian Consensus Treatment of Community Acquired Pneumonias
Harrison 'Principles of Internal Medicine

Tuberculosis Coalition for Technical Assistance. International Standards for Tuberculosis Care (ISTC). 2nd edition, The Hague, Tuberculosis Coalition for Technical Assistance, 2014

Tuberculosis Coalition for Technical Assistance. International Standards for Tuberculosis Care (ISTC). 2nd edition, The Hague, Tuberculosis Coalition for Technical Assistance, 2009

TUBERCULOSIS, A Manual for Medical Students *By Nadia Ait-Khaled and Donald A. Enarson*

Tuberculosis 2007 - From basic science to patient care, Juan Carlos Palomino, Sylvia Cardoso Leão, Viviana Ritacco

Toman's tuberculosis case detection, treatment, and monitoring : questions and answers edited by T. Frieden. – 2nd ed.

CONSPECTUS

1. Pneumonias – pathogenesis , classification, clinical features, differential diagnosis
2. Empirical therapy of community acquired pneumonias
3. Treatment of hospital acquired pneumonias
4. COPD – classification, diagnosis, clinical course
5. Treatment of COPD
6. Bronchial asthma – pathogenesis, clinical features, asthma severity scoring , diagnosis
7. Bronchial asthma – management of asthma attacks, treatment of stable asthma
8. Differential diagnosis between COPD and Asthma – clinical and functional parameters.
9. Purulent diseases of lungs – lung abscess, necrotizing pneumonia
10. Lung cancer - clinical features, diagnosis, treatment
11. Pulmonary embolism
12. Pleural diseases - classification, diagnosis and treatment
13. Respiratory failure
14. Antibiotics in the pulmonology
15. Classification, pathogenesis and diagnosis of tuberculosis
16. Primary tuberculosis complex. Tuberculous bronchadenitis
17. Miliary tuberculosis. Acute tuberculosis sepsis
18. Sub-acute and chronic blood disseminated tuberculosis
19. Focal and infiltrative – pneumonic tuberculosis
20. Tuberculoma of the lungs
21. Fibrous- cavernous tuberculosis
22. Treatment of tuberculosis

