THEMATIC PLAN OF LECTURES
for " Phthysiopulmonology " cycle
for the 4th year students of the Faculty of training for foreign countries
7-8 semester

1. **Introduction to the Phthisiopulmonology discipline. Epidemiology of tuberculosis**.
   1.1. Historical timeline of scientific findings on tuberculosis (TB). Discoveries in the diagnosis, treatment, and prevention of TB. Anti-TB health care system.
   1.2. Epidemiology of TB and important factors for TB distribution.
   1.3. The epidemiological indexes: morbidity (primary, general), mortality, infection; their dynamics. High and low TB prevalence regions and countries.
2. **Etiological agent of tuberculosis. Microbiological detection of MBT.**
   2.1. The causative agent of tuberculosis: morphological structure, properties. *Mycobacterium tuberculosis complex*.
   2.2. Morphological, biological, culture properties of *Mycobacterium tuberculosis (MTB)*. Non-tuberculosis mycobacteria *(NTM)*.
   2.3. Laboratory methods for detecting the causative agent of TB: Ziehl-Neelson microscopy, luminescent microscopy. Culture method of MTB detection. Automated MTB cultivation systems (BACTEC MGIT).
   2.4. Methods of identification of mycobacteria, drug susceptibility testing of MTB.
   2.5. Molecular genetic methods for the detection and identification of mycobacteria.
3. **Pathogenesis, pathomorphology and immunology of tuberculosis.**
   3.1. Sources of TB infection. Pathways of MTB invasion into the human body. The concept of TB infection and TB disease. Latent tuberculous infection (LTBI). Risk factors for TB infection and TB disease.
   3.2. Pathogenesis of TB. Primary and secondary TB.
   3.3. Morphological patterns of TB inflammation. TB granuloma.
   3.4. Anti-TB natural resistance and induced immunity. Hypersensitivity to TB antigens. Delayed tissue reaction
4. **Diagnostics of tuberculosis.**
   4.1. Clinical examination of TB patients
   4.2. Laboratory testing for TB disease.
   4.3. Immunological testing for TB hypersensitivity (tuberculin skin test, TB-antigen skin test, IGRAs).
   4.4. Instrumental diagnostics for TB.
   4.5. Surgical diagnostics for TB.
5. **Classification of tuberculosis. Primary tuberculosis.**
   5.1. Clinical classification of TB, TB diagnosis. The definition of active and cured TB.
   5.2. Primary TB: risk factors, pathogenesis and pathological anatomy.
   5.3. Clinical forms of primary TB: clinical and radiological manifestations, diagnostic peculiarities of primary TB. Clinical outcomes of primary TB.
6. **Secondary tuberculosis.**
   6.1. Epidemiological significance of secondary pulmonary TB.
   6.2. Clinical and radiological manifestations disseminated TB.
   6.3. Clinical patterns of pulmonary TB
7. **Chronic pulmonary TB disease. Complications of pulmonary tuberculosis.**

7.1. Predisposing risks for chronic pulmonary TB disease. Epidemiological role. Epidemiological significance of chronic pulmonary TB disease

7.2. Clinical and radiological manifestations of chronic TB cavitation. Chronic TB caverns, TB and post-TB pulmonary cirrhosis.

7.3. Complications of chronic pulmonary TB disease.

8. Extrapulmonary tuberculosis.

8.1. Epidemiology and classification of extrapulmonary TB.

8.2. Symptoms and clinical patterns of extrapulmonary TB.

8.3. TB of central nervous system.

8.4. TB of peripheral lymph nodes.

8.5. Skeletal TB.

9. Treatment of tuberculosis.

9.1. Basic principles and methods of anti-TB treatment.

9.2. Classification of anti-TB drugs. Side-effects of anti-TB treatment, prevention and maintenance therapy.

9.3. Chemotherapy regimens. Clinical categories of patients. Standard chemotherapy regimens.

9.4. Drug resistant TB. Types of drug resistance. Epidemiological significance of drug resistant TB. Causes of development, risk groups. Features of treatment.

9.5. Symptomatic treatment and palliative care for incurable TB patients.

10. Prophylaxis of tuberculosis.

10.1. Social prevention of TB, definition and target points.

10.2. Specific prevention of TB: BCG vaccination, chemoprophylaxis. Perspective for new anti-TB vaccines.

10.3. Sanitary prevention of TB. Indications for isolation and hospitalization of TB patients. TB transmitters. TB screening in households. Index case (index patient). Contact investigation and management.

11. Infectious control of tuberculosis.

11.1. Infection control in health-care settings. Aerobiology of transmission of mycobacteria.

11.2. Three-level hierarchy of TB infectious control.

11.3. TB hospitals and out-patient anti-TB medical centers.

12. Organization of anti-tuberculosis work.

12.1. Core principles of anti-TB national programs. Planning of anti-TB activities. International anti-TB strategy "The End TB".

12.2. Monitoring of TB patients at out-patient centers in urban and rural regions.

12.3. Anti-TB work of non-TB health-care providers.

12.4. TB case finding in medical care system. Anti-TB measures in high-risk groups.