Ministry of Health of Ukraine

Kharkiv National Medical University

ІІ Medical Faculty

Department of Phthisiology and Pulmonology

Branch of knowledge 22 «Healthcare»

Specialty 222 «Medicine»

Educational and professional program «Medicine»

Second master's level of higher education

SYLLABUS OF ACADEMIC DISCIPLINE

Phthisiology

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| Approved  by the Counsil of the Department  of Phthisiology and Pulmonology  Protocol  “28” August 2020 № 13  Head of the Department  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ O.S. Shevchenko  “\_\_\_\_\_”\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 20\_\_\_ |  | Approved by  Methodological Commission of KNMU on the problems of professional training of a therapeutic profile  Protocol  “\_\_\_\_”\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_20\_\_\_ № \_\_\_  Head  \_\_\_\_\_\_\_\_\_\_\_\_ P.G. Kravchun    “\_\_\_\_\_”\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_20\_\_\_\_ |

Kharkiv – 2020

Place of practical training: classrooms of the department of Phthisiology and Pulmonology of Kharkiv National Medical University on the bases: Municipal Nonprofit Enterprise of the Kharkiv Regional Council "Regional TB Dispensary No. 1" (Newtona str., 145), Municipal Nonprofit Enterprise of the Kharkiv Regional Council «Regional Tuberculosis Hospital No. 1» (Novo-Bavarsky av., 2), State Institution of Health Care «Regional Tuberculosis Hospital No. 3» (Pirogova str., 8)

Time of practical classes: classes1-5 – 12:25-15:55, classes 6-7– 12:25-16:45 OR classes 1-5 – 08:45-12:15, classes 6-7 – 08:00-12:15.

Lectures time: 09:20-11:00 OR 13:20-15:00

**Course developers:**

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Olga Stanislavna Shevchenko – Head of the Department, MD, Prof.



Irina Anatoliyivna Ovcharenko – Head Teacher of the Department, assistant

**Teachers**

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| --- | --- |
|  | Dmytro Olexandrovich Butov – MD, Prof., Responsible for students’ scientific work  Address: Pirogova str., 8 |
|  | Svitlana Leonidivna Matveyeva – PhD., Associate Prof., Responsible for the medical work of the department  Address: Newtona str., 145 |
|  | Olexandra Ivanivna Choporova – PhD, Assistant, Responsible for scientific work of the Department  Address: Novo-Bavarsky av., 2 |
| **C:\Users\User\AppData\Local\Temp\Говардовская.jpg** | Olga Olexandrivna Hovardovska –Assistant, Responsible for the submission of information about the department on electronic resources  Address: Novo-Bavarsky av., 2 |
| **C:\Users\Olha\Downloads\швец.jpg** | Olga Mykolaivna Svets  Address: Newtona str., 145 |

**7th semester 2020/2021**

**Course annotation:**

Course provides information about epidemiology, etiology, pathogenesis, clinical manifestations, diagnosis, treatment and prophylaxis of tuberculosis as well as its complications especially emergency ones

Credits – 3

Hours – 90.

Hours for full-time study: classroom hours – 40

self-study hours – 50

Practical classes 30 hours.

Lectures 10 hours

Control: differential credit.

**Aim:** mastering basic knowledge of epidemiology, etiology, pathogenesis, clinic, diagnosis, treatment and prevention of tuberculosis

**Tasks:**

* formation of students' ability to determine main symptoms and syndromes of tuberculosis;
* formation of students' ability to determine risk factors for tuberculosis;
* formation of students' ability to diagnose clinical forms of pulmonary and extrapulmonary tuberculosis;
* students' mastering of modern methods of tuberculosis diagnosis (bacteriological, determining the sensitivity of *M. tuberculosis* to anti-TB drugs, determining the DNA of *M. tuberculosis* by polymerase chain reaction, etc.);
* formation of students’ ability to diagnose complications of tuberculosis and provide emergency care in emergency conditions in patients with tuberculosis;
* formation of students’ ability to determine dispensary registration groups of people from high-risk groups and use the principles of tuberculosis prevention.

**Status of discipline:** normative

**Format of discipline:** mixed

**Teaching methods:** presentations, videos, guidelines, workbooks, lectures, case histories, X-rays etc.

Moodle link: <http://31.128.79.157:8083/course/view.php?id=454>

**Literature**

**Main literature:**

1. Phthisiology: textbook / V.I.Petrenko, O.K.Asmolov, M.G.Boyko et al. – Kiyv. – AUS Medicine Publishing.- 415 p.

2. Phthisiology: schemes, tables, pictures: Hand book for students / O. S. Shevchenko, S. L. Matveyeva, O. I. Choporova et al. – Kharkov : KNMU, 2017. – 164 p.

3.Phthysiology. Hand book for students / O.S.Shevchenko, S.L.Matveyeva, A.I.Choporova. – Kharkov: KhNMU, 2011. - 108 p.

4.Nodular tuberculosis. Manual/ Zaytceva S.I., Matveeva S.L., Kharkiv, KDMU, 2004 – 8 p.

**Additional literature:**

1. Clinical Tuberculosis. Manual /Crofton I., Horne N., Miller F. London, 1992. – 210 p.

2. WHO. 2009. WHO Report 2009 Global tuberculosis control - surveillance, planning, financing. WHO/HTM/TB/2008. 393 p.

3. Crofton J. Clinical Tuberculosis / J.Crofton, N. Horne, F.Miller – London.: Macmillan press LTD, 1995. - 210 p.

4.Harryes A.TB. Clinical manual for South East Asia/ A.Harryes, D. Maner, M. Uplecar – Biella: WHO, 1997 – 145 p. 1. Principles of Harrison’s internal medicine, self-assessment and board review 18th edition /Edited by Charles Wiener etc. - The McGraw-Hill Professional. – 2012. – 514 p.

5. Board review from Medscape. Case-based internal medicine self-assessment questions / Editor-in-Chief David C. Dale. - WebMD. – 2005. – 592 p.

6. Kaplan Medical USMLE Step 2 Clinical Knowledge Qbook, 5th edition/ Edited by Kaplan inc. – Kaplan Publishing. – 2011. - 540 p.

7. Harrison's principles of internal medicine, 18th Edition / Edited by Dan Longo, Anthony S. Fauci etc. - The McGraw-Hill Professional. – 2011. - 4012 p.

8. Davidson’s Principles and Practice of medicine, 21st edition / Edited by Nicki

R. Colledge, Brian R. Walker, Stuart H. Relston. - Churchill Livingstone – 2010. – 1376 p.

**Discipline prerequisites and core requisites:** integrates with disciplines: microbiology, pathological anatomy, pathological physiology, propaedeutics of internal medicine, internal medicine, radiology, pharmacology, epidemiology and hygiene, public health and health management.

**Results of education:**

1. The ability to make a diagnosis.

1.1. In the health care institution, its subdivisions and among the population:

• Be able to identify and record the leading clinical symptom or syndrome by making an informed decision, using the preliminary data of the patient's history, the data of the physical examination of the patient, knowledge about the person, his organs and systems, adhering to the relevant ethical and legal norms.

• To be able to make the most probable or syndromic diagnosis by making an informed decision, by comparing with the standards, using the preliminary data of the patient's history and the patient's examination data, based on the leading clinical symptom or syndrome, using knowledge about the person, his organs and systems, adhering to the appropriate ethical and legal standards.

1.2. In a health care institution, its subdivisions:

• To prescribe laboratory and / or instrumental examination by making an informed decision based on the most probable or syndromic diagnosis, according to standard schemes, using knowledge about a human, organs and systems, ethical and legal norms.

• Carry out differential diagnosis of the disease by making an informed decision, according to a certain algorithm, using the most probable or syndromic diagnosis, data from laboratory and instrumental examination, knowledge about human, organs and systems, ethical and legal norms.

• Making a preliminary diagnosis by making an informed decision and logical analysis, using the most probable or syndromic diagnosis, data from laboratory and instrumental examination of the patient, conclusions of differential diagnosis, knowledge about a human, organs and systems, ethical and legal norms.

2. Skills in collecting patient information

Collect data on patient complaints, disease history, life history (including occupational history), in the conditions of a health care institution, its subdivision or at a patient's home, using the results of an interview with a patient, according to the standard patient survey scheme.

Under any circumstances (in a healthcare institution, its subdivision, at the patient's home, etc.), using knowledge about a human, organs and systems, according to certain algorithms:

• collect information about the general state of the patient (consciousness, constitution), perform examination of the skin, subcutaneous fat layer, palpation of lymph nodes, thyroid and mammary glands;

• examine the state of the cardiovascular system (examination and palpation of the area of ​​the heart and superficial vessels, determination of the percussion boundaries of the heart and blood vessels, auscultation of the heart and blood vessels)

• examine the state of the respiratory system (examination of the chest and upper respiratory tract, palpation of the chest, percussion and auscultation of the lungs);

• examine the state of the abdominal organs (examination of the abdomen, palpation and percussion of the intestines, stomach, liver, spleen, palpation of the pancreas, kidneys, pelvic organs, digital examination of the rectum);

• examine the condition of the musculoskeletal system (examination and palpation)

• examine the state of the nervous system ...

• examine the state of the genitourinary system ...

3. Ability to assess the results of laboratory and instrumental research

To evaluate information in the healthcare institution, its subdivision, applying a standard procedure, using knowledge about a human, organs and systems, based on the results of laboratory and instrumental studies.

4. Ability to determine the principles of the treatment of diseases

Prescribe the treatment (conservative, surgical) of the disease, using knowledge about a human, organs and systems, ethical and legal norms, by making an informed decision on existing algorithms and standard schemes.

5. Ability to diagnose emergency conditions

Making a diagnosis by making an informed decision and assessing a person's condition, under any circumstances (at home, on the street, in a health care institution, its subdivision), in conditions of lack of information and limited time, using standard methods of physical examination and available disease history, knowledge of the human, organs and systems, adhering to the relevant ethical and legal norms.

6. Ability to determine the tactics of providing emergency medical care

Determine the tactics of providing emergency medical care, under any circumstances, using knowledge about a human, organs and systems, ethical and legal norms, by making an informed decision based on the diagnosis of an emergency in a limited time using standard schemes.

7. Skills in providing emergency medical services help

Provide emergency medical care, under any circumstances, using knowledge about a human, organs and systems, adhering to the appropriate ethical and legal norms, by making an informed decision, based on the diagnosis of an emergency in a limited time, according to certain tactics, using standard schemes.

8. Skills of performing medical procedures

Perform medical manipulations based on a preliminary clinical diagnosis and / or indicators of the patient's state, using knowledge about a human, organs and systems, ethical and legal norms, by making an informed decision and using standard techniques.

9. The ability to determine the required work and rest regime in the treatment

Determine the necessary mode of work and rest in the treatment of a disease in a healthcare institution, at home with a patient on the basis of a preliminary clinical diagnosis, using knowledge about a human, organs and systems, ethical and legal norms, by making an informed decision on existing algorithms and standard schemes

10. Ability to determine nutritional therapy in the treatment

Determine the necessary therapeutic nutrition in the treatment in a health care institution, at home with a patient on the basis of a preliminary clinical diagnosis, using knowledge about a human, organs and systems, ethical and legal norms, by making an informed decision on existing algorithms and standard schemes.

11. Ability to maintain medical records

In a health care institution, its subdivisions:

Maintain medical documentation for the patient and the population using standard technology, based on regulatory documents.

12. Ability to carry out sanitary and hygienic and preventive measures

12.1. To form, in the conditions of a health care institution, its subdivisions in production, using a generalized procedure for assessing a person's health, knowledge about a human, organs and systems, ethical and legal norms, by making an informed decision, among the assigned contingent of the population:

• dispensary groups of patients;

• groups of healthy people related to dispensary observation.

12.2. Implement a system of anti-epidemic and preventive measures, in the context of a health care institution, its subdivisions based on data on the health status of certain population groups and on the presence of environmental impact on it, using existing methods, within the framework of primary health care to the population

12.3. Organize secondary and tertiary prevention among the population, using a generalized procedure for assessing the state of human health (screening, preventive medical examination), knowledge about a human, organs and systems, ethical and legal norms, by adopting a reasoned decision, in a healthcare institution, in particular:

• form dispensary observation groups;

• organize medical and recreational activities differentiated from the group of medical examination

13. Ability to plan preventive and anti-epidemic measures for infectious diseases

To plan measures to prevent the spread of infectious diseases in the conditions of a health care institution, its subdivisions, based on the results of an epidemiological examination of foci of infectious diseases, epidemiological analysis, using existing preventive and anti-epidemic methods.

14. Ability to carry out preventive and anti-epidemic measures for infectious diseases

14.1. Carry out in the conditions of a health care institution, its subdivisions:

• detection and early diagnosis of infectious diseases;

• primary anti-epidemic measures in the focus of an infectious disease.

14.2. To identify risk groups, risk areas, risk time, risk factors in a health care institution, its subdivisions using statistical and laboratory methods, and carry out an epidemiological analysis of the infectious morbidity of the population:

15. The ability to determine the tactics of maintaining people subject to dispensary observation

In a healthcare institution or at home with a patient, based on the data obtained about the patient's health, using standard schemes, using knowledge about a human, organs and systems, ethical and legal norms, by making an informed decision:

• determine the tactics of examination and secondary prevention of patients during dispensary observation;

• define tactics of examination and primary prevention of healthy individuals related to dispensary observation;

16. Ability to provide an examination of working capacity

Determine the presence and severity of disabilities, the type, degree and duration of disability with the preparation of appropriate documents, in the conditions of a health care institution on the basis of data on the disease and its course, especially the professional activity of a person.

17. Provide the requirements of ethics, bioethics and deontology in professional activities.

**Organization of training**

**Lectures**

|  |  |  |
| --- | --- | --- |
| № | Topic | Hours |
| 1 | Definition of tuberculosis as a scientific and practical problem. Epidemiology of tuberculosis. The problem of multidrug-resistant and HIV-associated tuberculosis. The epidemic process of tuberculosis. Pathogenesis of tuberculosis infection. | 2 |
| 2 | Detection and diagnosis of tuberculosis | 2 |
| 3 | General principles and methods of tuberculosis treatment. Prevention of tuberculosis. Infection control of tuberculosis infection. | 2 |
| 4 | Clinical variants of primary tuberculosis | 2 |
| 5 | Clinical variants of secondary tuberculosis | 2 |
|  | Total | 10 |

***Practical classes***

|  |  |  |
| --- | --- | --- |
| № | Topic | Hours |
| 1 | The causative agent of tuberculosis, its structure, metabolism, variability, resistance in the environment. Classification. Pathogenicity and virulence of mycobacteria. The main epidemiological indicators of tuberculosis infection and their assessment. Epidemiology of tuberculosis. Sources of tuberculosis infection. The mechanism of infection transmission. Pathogenesis of tuberculosis. Immune response for tuberculosis. Pathomorphosis of tuberculosis. Clinical classification of tuberculosis. Latent tuberculosis infection, primary and secondary tuberculosis. Risk groups. | 4 |
| 2 | Symptoms of tuberculosis. Patient's route with a cough at the primary care stage. Laboratory methods for the detection of tuberculosis. Microscopic diagnosis of tuberculosis. Bacteriological methods for the diagnosis of tuberculosis. Molecular genetic diagnosis of tuberculosis. X-ray diagnosis of tuberculosis. The role of computed and magnetic resonance imaging in the diagnosis and differential diagnosis of tuberculosis. Radiological semiotics of pulmonary and extrapulmonary tuberculosis. The role of instrumental and invasive methods in confirming the diagnosis. Tuberculin diagnosis: principle of the method, indications, role in identifying latent tuberculosis infection.  Clinical analysis of the patient. | 4 |
| 3 | The basic principles and methods of pulmonary tuberculosis treatment. Anti-TB drugs. Standard chemotherapy regimens. Chemoresistance: mono-, poly-, multidrug-, extensively drug-resistant tuberculosis. Standard, individual, empirical regimens for the treatment of drug-resistant tuberculosis. Treatment of extrapulmonary tuberculosis. Side effects of tuberculosis chemotherapy, strategies to overcome them. Treatment monitoring, effectiveness evaluation. Determining the results of tuberculosis treatment. Directly observed treatment. Outpatient and inpatient treatment of tuberculosis. Adherence to treatment. Methods of surgical treatment of pulmonary and extrapulmonary tuberculosis. Palliative care. The chain of transmission, ways to interrupt it: identification, isolation, effective treatment of infection sources, infection control, BCG vaccination, chemoprophylaxis. Infection control: administrative, engineering, individual. The distribution of patients, the concept of high, medium, low risk areas. Respiratory hygiene. Monitoring air condition of enclosed spaces: natural, artificial ventilation. Air filtration. UV irradiation: irradiator designs. Individual respiratory protection: types of respirators, selection and application rules. Tuberculosis contacts, foci of tuberculosis infection. Contact tracking. BCG vaccination: terms, contraindications, technique. Post-vaccination period. Complications of BCG. Indications for chemoprophylaxis of tuberculosis. Chemoprophylaxis regimens. Clinical analysis of the patient. | 4 |
| 4 | Clinical variants of primary pulmonary tuberculosis. Tuberculosis in children. Tuberculosis of unidentified localization, tuberculosis of intrathoracic lymph nodes, primary tuberculosis complex. The effect of mass BCG vaccination on the pathomorphosis of tuberculosis in children. Tuberculosis in vaccinated and unvaccinated children. Generalized (miliary) tuberculosis. Clinical analysis of the patient. | 4 |
| 5 | Clinical variants of secondary tuberculosis. Disseminated pulmonary tuberculosis. Tuberculosis of the pleura, lymph nodes, CNS. Focal and infiltrative pulmonary tuberculosis. Caseous pneumonia, pulmonary tuberculoma. Fibrous-cavitary and cirrhotic pulmonary tuberculosis. Clinical analysis of the patient. | 4 |
| 6 | HIV-associated tuberculosis. Pathogenesis of tuberculosis on the background of HIV infection. TB/HIV co-infection course, diagnosis, treatment. Terms of anti-tuberculosis and antiretroviral treatment onset. Determining the prognosis of the disease. The syndrome of the immune reconstitution in patients with HIV infection, its effect on the course of tuberculosis. Other comorbidities in tuberculosis patients: diabetes mellitus, pneumoconiosis, kidney diseases, treatment with immunosuppressants, tumor necrosis factor. Tuberculosis and pregnancy. Discussion and submission of case history. | 5 |
| 7 | Emergency conditions in tuberculosis patients: spontaneous pneumothorax, pulmonary hemorrhage, anaphylactic shock, bronchospasm. Diagnostics, emergency care.  Differentiated credit | 5 |
| Total | | 30 |

***Self-work***

|  |  |  |
| --- | --- | --- |
| № | Topic | Hours |
| 1 | Non-specific treatment of TB-patients (hygiene and dietary regimens, pathogenetic and symptomatic treatment). Surgical treatment. Spa treatment | 5 |
| 2 | Tuberculosis of peripheral lymph nodes. Tuberculosis of bones and joints. Clinical manifestations, diagnosis, treatment | 5 |
| 3 | TB pleuritis | 5 |
| 4 | Tuberculosis: roentgen-semiotics | 5 |
| 5 | Test with recombinant tuberculous antigen | 5 |
| 6 | Interferon-γ release assays | 5 |
| 7 | Radiological methods of diagnosis of pulmonary tuberculosis | 5 |
| 8 | Method of spirography, changes in spirographic parameters for respiratory tuberculosis | 5 |
| 9 | Functional methods of TB diagnosis | 5 |
| 10 | Tuberculosis: differential diagnosis | 5 |
| Total | | 50 |

**Individual tasks:**

1). Preparation of a literature review or research (by choice or arrangement with a teacher). 2). Clinical analysis of a patient with tuberculosis. 3). Report on the patient's medical history in a practical class. 4). Presentation of a lecture or presentation in a practical class. 5) Writing abstracts, articles. 6). Participation in Olympiads, oral presentation, poster presentation, abstract writing at conferences.

**Course policy**

To obtain a positive total mark, the student must attend all lectures and practical classes, as well as get a positive mark (3, 4 or 5) at each practical class and get at least 50 points for differential credit. At the penultimate lesson, the student should submit a filled workbook and case history for clinical tasks given by the teacher in the first lesson.

For admission to the lesson, the student must have a medical uniform and indoor shoes. To get a positive mark, the student must be ready to answer the questions about the topic of the lesson.

If a lecture is missed, the student must prepare an essay on a missed topic and submit it to do work-off to his teacher in the time free from the academic load or to the duty teacher. The essay should be prepared in accordance with the principles of academic integrity.

If a practical lesson is missed, the student can work-off it with his teacher in the teacher’s free time or with the duty teacher. The work-off is provided as an interview on a missed topic. A student can work-off a missed lesson without a permission within a month. After this period, the student must get the permission from the dean's office to work-off the lesson.

Bad marks can be work-offed without permission at any time.

To get extra points, the student must prepare and publish the abstract or an article or make an oral report at the conference. To prepare an individual task, the student can use the help of his teacher and other employees of the department. The approval of the individual points is carried out at a meeting of the department. The individual task should be prepared according to the principles of academic integrity.**.**

**Control methods**

**Organization of current control**

Mastering the topic (current control) is controlled in a practical lesson in accordance with specific aims. Methods of assessing the level of preparation: tests, cases, interpreting and evaluating laboratory tests results, analyzing and evaluating the results of instrumental studies and parameters characterizing the functions of the human body, monitoring the mastering of practical skills. The assessment is carried out according to the traditional 4-point system: "excellent", "good", "satisfactorily" and "unsatisfactorily". Recalculation of the average grade for current educational activities on a multi-point scale is carried out in accordance with table 2.

The final grade for current academic activities in the semester is determined as the arithmetic average of national grades for each lesson and is converted to a multi-point scale according to table 1.

Table 1

**Converting an average mark of current activity into a multi-point scale**

| 4-point scale | 120-point scale |  | 4-point scale | 120-point scale |
| --- | --- | --- | --- | --- |
| 5 | 120 | 3.91-3,94 | 94 |
| 4.95-4,99 | 119 | 3.87-3,9 | 93 |
| 4.91-4,94 | 118 | 3.83- 3,86 | 92 |
| 4.87-4,9 | 117 | 3.79- 3,82 | 91 |
| 4.83-4,86 | 116 | 3.74-3,78 | 90 |
| 4.79-4,82 | 115 | 3.7- 3,73 | 89 |
| 4.75-4,78 | 114 | 3.66- 3,69 | 88 |
| 4.7-4,74 | 113 | 3.62- 3,65 | 87 |
| 4.66-4,69 | 112 | 3.58-3,61 | 86 |
| 4.62-4,65 | 111 | 3.54- 3,57 | 85 |
| 4.58-4,61 | 110 | 3.49- 3,53 | 84 |
| 4.54-4,57 | 109 | 3.45-3,48 | 83 |
| 4.5-4,53 | 108 | 3.41-3,44 | 82 |
| 4.45-4,49 | 107 | 3.37-3,4 | 81 |
| 4.41-4,44 | 106 | 3.33- 3,36 | 80 |
| 4.37-4,4 | 105 | 3.29-3,32 | 79 |
| 4.33-4,36 | 104 | 3.25-3,28 | 78 |
| 4.29-4,32 | 103 | 3.21-3,24 | 77 |
| 4.25- 4,28 | 102 | 3.18-3,2 | 76 |
| 4.2- 4,24 | 101 | 3.15- 3,17 | 75 |
| 4.16- 4,19 | 100 | 3.13- 3,14 | 74 |
| 4.12- 4,15 | 99 | 3.1- 3,12 | 73 |
| 4.08- 4,11 | 98 | 3.07- 3,09 | 72 |
| 4.04- 4,07 | 97 | 3.04-3,06 | 71 |
| 3.99-4,03 | 96 | 3.0-3,03 | 70 |
| 3.95- 3,98 | 95 | Less than 3 | Unsatisfactorily |

**Evaluation of individual tasks** of the student is carried out for the performance of individual tasks: report at the scientific and practical conferences of the department or university, writing abstracts, articles - 5 - 10 points which can be added as encouraging points. The total amount of points for current educational activities may not exceed 120 points.

**Organization of the final control**

Differentiated classification is a process which allows to check the following:

- level of theoretical knowledge;

- development of creative thinking;

- independent work skills;

- competencies - the ability to synthesize acquired knowledge and apply them in solving practical problems.

Differential credit is carried out by the group teacher at the last practical lesson.

**Procedure of differential credit:**

1. Test task package: basic test tasks STEP 2 - 30 tests. Evaluation criterion - 95% of correct answers; “passed / did not pass”

2. Assessment of practical skills mastering and theoretical knowledge on all questions of the subject on the day of the exam (Table 2).

Table 2

**Assessment of theoretical knowledge (practical skills are assessed according to the criteria of “completed”, “not completed”)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Question | «5» | «4» | «3» | Oral answers for question which include theoretical part of the subject | The student gets from 10 to 16 points for each correct answer:  «5» - 16 points;  «4» - 13 points;  «3» - 10 points. |
| 1 | 16 | 13 | 10 |
| 2 | 16 | 13 | 10 |
| 3 | 16 | 13 | 10 |
| 4 | 16 | 13 | 10 |
| 5 | 16 | 13 | 10 |
|  | 80 | 65 | 50 |

3. Tasks for practical and professional training, reflecting skills in assessing the results of laboratory and instrumental tests for diagnosis and the choice of treatment tactics.

**Total mark**

The maximum number of points that a student can get is 200 points. The maximum number of points for current educational activities is 120 points. The maximum number of points for differential credit is 80 points. The minimum number of points is 120. The minimum number of points for current educational activities is 70. The minimum number of points for the differential credit is 50.

Evaluation of the results of the subject study is carried out directly during the differential credit. The total score is defined as the sum of the points for the current educational activity and the differential credit and ranges from 120 to 200 points. The correspondence of marks on a 200-point scale, a four-point scale, and the ECTS scale is given in Table 3.

Table 3

**Correspondence of marks on a 200-point scale, a four-point scale and the ECTS scale**

|  |  |  |
| --- | --- | --- |
| 200-points scale | ECTS scale | Four-point scale |
| 180–200 | А | Excellent |
| 160–179 | В | Good |
| 150–159 | С | Good |
| 130–149 | D | Satisfactorily |
| 120–129 | E | Satisfactorily |
| Less than 120 | F, Fx | Unsatisfactorily |

Students who do not meet the requirements of the curriculum are given an **Fx** mark if they were allowed to pass the differential credit but did not pass it. Mark **F** is given to students who have not been allowed to pass the differential credit.

**Questions for differential credit**

1. Tuberculosis risk factors
2. Possible treatment results in patients with pulmonary tuberculosis
3. Peculiarities of tuberculosis causative agent
4. Ways of *M. tuberculosis* spreading
5. Clinical classification of tuberculosis and formulation of the diagnosis
6. Tuberculosis symptoms and signs
7. The role of bacterioscopy, bacteriological and molecular-genetic tests in the diagnosis of tuberculosis
8. MTB resistance types
9. Tuberculosis X-ray signs
10. Mantoux test and test with recombinant tuberculosis antigen: purpose, procedure and interpretation
11. Basic principles of tuberculosis patients treatment
12. Side-effects of anti-tuberculosis drugs, prevention of side-effects
13. Standard tuberculosis treatment regimens depending on treatment category
14. Criteria of tuberculosis treatment effectiveness
15. Ways of tuberculosis prophylaxis
16. BCG vaccination and revaccination: indications and contraindications
17. BCG vaccination and revaccination procedure
18. BCG vaccination and revaccination complications; prophylaxis and treatment of those complications
19. Activities carried out in foci of tuberculosis infection, depending on the category of foci
20. Features of the course and treatment of pulmonary tuberculosis associated with other diseases and conditions
21. Dispensary supervision categories

**Practical skills**

1. Interpretation of bacterioscopy, molecular-genetic and bacteriological test results
2. Drawing up a scheme for examining a patient with tuberculosis and analysis of the data obtained
3. Determination of the clinical forms of tuberculosis and the formulation of the diagnosis according to the classification
4. Tuberculosis diagnosis basing on anamnestic, clinical, X-ray and laboratory data
5. Emergency care in urgent conditions in patients with tuberculosis
6. Diagnosis of primary and secondary tuberculosis complications
7. The appointment of complex therapy for tuberculosis patients
8. Formulation of the diagnosis of primary and secondary forms of tuberculosis according to the classification
9. X-ray analysis in primary and secondary forms of tuberculosis
10. Medical records of TB
11. Analysis of Mantoux test and test with recombinant tuberculosis antigen results

Head of the Department

of Phthisiology and Pulmonology

MD, Professor O.S. Shevchenko