

Ministry of Healthcare of Ukraine
Poltava State Medical University

Department of Internal Medicine № 3 with Phthisiology

SYLLABUS

PHTHISIOLOGY

(title of the academic discipline)

selective academic discipline

(compulsory / selective discipline)

level of higher education	the second (master's) level of higher education
field of knowledge	22 «Healthcare»
specialty	221 «Dentistry»
academic qualification	Master of Dentistry
professional qualification	Dentist
academic and professional program	«Dentistry»
mode of study	full-time
course(s) and semester(s) of study of the discipline	IV course VII - VIII semester

INFORMATION ABOUT LECTURERS WHO DELIVER THE ACADEMIC DISCIPLINE

Surname, name, patronymic of the lecturer (lecturers), scientific degree, academic title	Yareshko Anatolii Hryhorovych, doctor of medical sciences, professor; Vorodyukhina Alla Kyrylivna, candidate of medical sciences, associate professor; Filatova Olena Viktorivna, candidate of medical sciences, associate professor; Kulish Maryna Volodymyrivna
Profile of the lecturers	https://int-med-three.pdmu.edu.ua/team
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MAIN CHARACTERISTICS OF THE ACADEMIC DISCIPLINE

The scope of the academic discipline (module)

Number of credits / hours – 3,0 / 90,0 of which:

Lectures (hours) – 6

Seminar classes (hours) are not included in the work academic program

Practical classes (hours) – 30

Self-directed work (hours) – 54

Type of control: final modular control

The policy of the academic discipline

The organization of the educational process under the educational component "Phthysiology" is implemented at the Department of Internal Medicine No. 3 with phthysiology of the Poltava State Medical University in accordance with the "Regulations on the Organization of the Educational Process at the Poltava State Medical University" and other current regulatory documents (<https://www.pdmu.edu.ua/n-process/department-npr/normativni-dokumenty>).

The educational process in the discipline "Physiology" in special conditions (martial law, quarantine during a pandemic, etc.) is carried out using distance learning technologies, in particular, lectures and practical classes are conducted using the ZOOM platform, Google Meet, Google Classroom, etc.

Applicants of higher education are obliged to fully master the knowledge, skills, practical skills and competences of the educational discipline "Physiology", adhering to the principles of academic integrity - "Regulations on the academic integrity of education applicants and employees of the Poltava State Medical University" (https://www.pdmu.edu.ua/storage/sections_nv/docs_links/Sj670MBVmC9qGVuTmHU8k9ZGKuX3DlZlwRNr8pBu.pdf?_ga=2.258226506.1531052886.1673862262-1300049335.1674110252).

Observance of academic integrity involves: independent performance of educational tasks, compliance with copyright legislation, provision of reliable information about the results of initial and scientific activities. A violation of academic integrity is considered to be: academic plagiarism, self-plagiarism, falsification, writing

off, bribery. For violations of academic integrity, students may be prosecuted according to regulatory documents.

The presence of students at all types of classes is mandatory (except for good reason), lateness to classes is unacceptable!

Description of the academic discipline (summary)

The discipline "Phthisiology" is a clinical discipline, by of the study of which assimilates students basic theoretical knowledge on the diagnosis, treatment and prevention of tuberculosis, the diagnosis of tuberculosis complications requiring emergency care, the organization of medical care for patients with tuberculosis of the maxillofacial area.

Pre-requisites and post-requisites of the academic discipline (interdisciplinary links):

pre-requisites - "Physiology" as an educational discipline is based on the study of human anatomy by students; histology, cytology and embryology; physiology; microbiology, virology and immunology; pathophysiology; pathomorphology; radiology; pharmacology; propaedeutics of internal medicine; hygiene and ecology and integrates with these disciplines;

post-requisites - "Physiology" as an educational discipline provides connections with the following disciplines when studying: internal medicine, including infectious diseases and epidemiology, clinical pharmacology; pediatrics; therapeutic stomatology; children's therapeutic dentistry; surgery, including oncology and neurosurgery; otorhinolaryngology; emergency and urgent medical care and formation of skills to apply knowledge of phthisiology in the process of further education and professional activity.

The aim and tasks of the academic discipline:

- the aim of studying the academic discipline is to familiarize students with the main problems in modern phthisiology, mastery the knowledge of organizing the provision of medical care for patients with tuberculosis, develop the basics of clinical thinking in students, acquire professional competencies for examining the patients with tuberculosis, conduct differential diagnosis of tuberculosis with other diseases, establishing a diagnosis, prescribing treatment and providing emergency medical care in emergency conditions;
- the main tasks of studying the discipline are to master students' skills in diagnosing, treating and preventing tuberculosis, diagnosing complications of tuberculosis requiring emergency care, and organization of medical care for patients with tuberculosis.

Competences and learning outcomes in accordance with the academic and professional program, the formation of which is facilitated by the discipline

The discipline "Tuberculosis" provides students with the acquisition of competencies:

- *integral*:

ability to solve complex problems and problems in the field of health care in the specialty "Dentistry" in a professional activity or in the learning process, which involves

research and / or innovation and is characterized by uncertainty of conditions and requirements;

- *general*:

1. Ability to abstract thinking, analysis and synthesis.
2. Knowledge and understanding of the subject area and understanding of professional activity.
3. Ability to apply knowledge in practice.
4. Ability to communicate in the state language both orally and in writing.
5. Ability to communicate in English. Ability to use international Greek-Latin terms, abbreviations and clichés in professional oral and written communication.
6. Skills of using information and communication technologies.
7. Ability to search, process and analyze information from various sources.
8. Ability to adapt and act in a new situation.
9. Ability to identify, pose and solve problems.
10. Ability to work in a team.

- *special (professional)*:

1. Ability to collect medical information about the patient and analyze clinical data.
2. Ability to interpret the results of laboratory and instrumental research.
3. Ability to diagnose: determine the preliminary, clinical, final, concomitant diagnosis, emergencies.
4. Ability to plan and carry out measures for the prevention of diseases of organs and tissues of the oral cavity and maxillofacial region;
5. The ability to determine the management tactics of patients with diseases of the organs and tissues of the oral cavity and maxillofacial region with concomitant somatic diseases;
6. Ability to determine tactics, methods and provision of emergency medical assistance;
7. Ability to maintain normative medical documentation.

Learning outcomes of the academic discipline:

upon completing their study in the academic discipline, students must

know:

- leading clinical symptoms and syndromes of tuberculosis;
- laboratory methods of tuberculosis diagnosis;
- microbiological methods of tuberculosis diagnosis;
- radiological methods of tuberculosis diagnosis;
- methods of diagnosis of latent tuberculosis infection;
- histological diagnosis of tuberculosis;
- clinical classification of tuberculosis;
- primary and secondary forms of tuberculosis of different localization;
- complications of tuberculosis;
- features of the course of tuberculosis against the background of HIV / AIDS;
- differential diagnosis of tuberculosis with other diseases of organs and tissues of the oral cavity and maxillofacial region;
- algorithm for managing a dental patient with pulmonary tuberculosis;

- tactics of managing a patient with tuberculosis of organs and tissues of the oral cavity and maxillofacial region;
- tuberculosis prevention measures;
- infection control measures;
- requirements of ethics, bioethics and deontology when working with patients with tuberculosis.

be able to:

- identify and identify the leading clinical symptoms and syndromes of tuberculosis;
- assess the condition of the maxillofacial organs;
- to establish a probable preliminary clinical diagnosis of tuberculosis according to standard methods, using the data of the anamnesis and examination of the patient;
- evaluate the results of laboratory, microbiological, radiological, histological methods of tuberculosis diagnosis;
- analyze the results of tuberculin tests and quantiferon test;
- to carry out differential diagnosis of tuberculosis with other diseases of organs and tissues of the oral cavity and maxillofacial region;
- to determine the tactics of the dental patient with pulmonary tuberculosis;
- determine the tactics of management of a patient with tuberculosis of the organs and tissues of the oral cavity and maxillofacial region;
- diagnose and provide emergency care in emergencies in patients with tuberculosis.

Thematic plan of lectures (by modules), specifying the basic issues, which are considered at the lecture

Seq. No.	Title of the topic	Number of hours
Module 1. Tuberculosis		
1	Determination of the concept of tuberculosis. Epidemiology of tuberculosis. Etiology and pathogenesis of tuberculosis. Diagnosis of tuberculosis. Main questions: Definition of tuberculosis as a disease. Epidemiology of tuberculosis in Ukraine and in the world. Etiology and pathogenesis of tuberculosis. Symptoms that may indicate tuberculosis. The role of laboratory methods in the detection of tuberculosis. Drug sensitivity tests. Molecular genetic diagnosis of tuberculosis. The role of radiological research methods in the diagnosis of tuberculosis. The role of instrumental and invasive methods in confirming the diagnosis. Tuberculin diagnosis. Quantiferon test.	2
1	Tuberculosis of the mucous membranes of the oral cavity and maxillofacial bones. Main questions: Pathogenesis, pathomorphology and classification of tuberculosis of the mucous membranes of the oral cavity and maxillofacial bones. Clinical manifestations, diagnosis, differential diagnosis and features of treatment of patients with tuberculosis of the mucous membranes of the oral cavity and maxillofacial bones.	2
1	Treatment and prevention of tuberculosis. Main questions:	2

	Classification of anti-TB drugs. Standard, individual, empirical regimens of tuberculosis chemotherapy. Side effects of tuberculosis chemotherapy. Treatment monitoring, evaluation of effectiveness. Methods of surgical treatment of pulmonary and extrapulmonary tuberculosis. The concept of foci of tuberculosis infection. The concept of infection control. BCG vaccination: indications, contraindications, technique, course of the post-vaccination period, complications. Chemoprophylaxis of tuberculosis: types, indications, methods.	
	Total	6

Thematic plan of seminar classes by modules and content modules, specifying the basic issues, which are considered at the seminar class – the work academic program does not provide.

Thematic plan of practical classes by modules and content modules, specifying the basic issues, which are considered at the practical class

Seq. No.	Title of the topic	Number of hours
Module 1. Tuberculosis <i>Content module 1. General issues of tuberculosis.</i>		
1	Epidemiology, etiology, pathogenesis of tuberculosis. Main questions: The main epidemiological indicators. The causative agent of tuberculosis, its properties. Sources of tuberculosis infection. Risk factors for tuberculosis. Ways of tuberculosis infection, the spread of the Office in the human body. Pathogenesis of tuberculosis. The concept of latent tuberculosis infection. Primary and secondary tuberculosis.	2
<i>Content module 2. Detection and diagnosis of tuberculosis.</i>		
2	Clinical examination of a patient with tuberculosis: interrogation, inspection, palpation, percussion, auscultation. Main questions: Features of clinical examination of a patient with tuberculosis: survey, physical methods of examination: the importance of palpation, percussion and auscultation in the examination of a patient with tuberculosis.	2
3	Laboratory diagnosis of tuberculosis. Methods of detecting MBT. Histological diagnosis of tuberculosis. Main questions: Diagnostic value of changes in the general analysis of blood at patients with pulmonary tuberculosis. Microscopic diagnosis of tuberculosis. Cultural methods for the study of Mycobacterium tuberculosis on a liquid and dense nutrient medium. Drug sensitivity tests. Molecular genetic diagnosis of tuberculosis. Methods Xpert MTB / RIF and GenoType MTBDRplus: features of application, indications, advantages and disadvantages, interpretation of results. Histological signs of tuberculosis.	2
4	Methods of radiological diagnosis of tuberculosis. Main questions: Methods of X-ray examination of patients with tuberculosis of the respiratory organs and intrathoracic lymph nodes (X-ray, tomo- and fluorography, computed tomography, radioscopy). Radiological syndromes: lesions of the lung root, dissemination, infiltration, rounded shadow, cavity, fibrosis. Clinical forms of	2

	pulmonary tuberculosis in X-ray imaging.	
5	Tuberculin diagnostics (Mantoux test, test Koch). Quantiferon test. Main questions: The concept of tuberculin. The role of tuberculin testing in the detection of latent tuberculosis infection. Mantoux test with 2 TO PPD-L: the purpose of production, technique, evaluation of results. The concept of "turn" of the tuberculin test. Differential diagnosis of post-vaccination and infectious immunity. Koch's test: the purpose of staging, technique of execution, evaluation of results. Quantiferon test.	2
Content module 3. Treatment and prevention of tuberculosis.		
6	Treatment of patients with tuberculosis: antimycobacterial drugs, protocols of the treatment of patients with tuberculosis. Main questions: Classification of anti-tuberculosis drugs, their characteristics. Categories of treatment of patients with tuberculosis. Treatment regimens for patients with active tuberculosis. Bacteriological principles of treatment of patients with chemoresistant tuberculosis. Carrying out anti-tuberculosis therapy in an outpatient setting. Methods of surgical treatment of pulmonary and extrapulmonary tuberculosis. Criteria for the treatment of patients with tuberculosis.	2
7	Prevention of tuberculosis. Main questions: Social prevention. Sanitary prevention, its tasks. The concept of foci of tuberculosis infection. Categories of cells according to the degree of epidemiological danger, criteria for its determination. Work in the center of tuberculosis infection on tuberculosis prevention. BCG vaccination: types of vaccines, technique, contraindications, course after the vaccination period, complications. Chemoprophylaxis of tuberculosis: types, indications, methods.	2
Content module 4. Clinical classification of tuberculosis. Clinical forms of pulmonary and extrapulmonary tuberculosis. Complications of tuberculosis that require emergency care.		
8	Clinical forms of primary tuberculosis. Tuberculosis unknown location, tuberculosis of intrathoracic lymphatic nodes, primary tuberculosis complex: pathogenesis, clinic, diagnosis. Main questions: Formulation of the diagnosis of tuberculosis according to the classification. Tuberculosis of unknown location: clinical manifestations, course. Tuberculosis of intrathoracic lymph nodes: pathogenesis, clinical and radiological forms. Primary tuberculosis complex: clinical manifestations, course, diagnosis.	2
9	Disseminated tuberculosis of lungs. Miliary tuberculosis. Tuberculosis of the nervous system and the meninges. Pathogenesis, clinic, diagnosis. Main questions: Pathogenesis of disseminated pulmonary tuberculosis. Clinical variants of the course (acute (miliary), subacute, chronic) and their radiological features. Clinic, diagnosis. Tuberculosis of the nervous system and meninges: pathogenesis, clinic, diagnosis.	2
10	Focal and infiltrative lungs tuberculosis. Caseous pneumonia. Tuberculoma of lungs. Pathogenesis, clinic, diagnostics. Main questions: Pathogenesis, clinic and diagnosis of focal and infiltrative forms of tuberculosis. The reasons for the development of caseous pneumonia, the peculiarities of its	2

	3. Clinical classification of tuberculosis. Main questions: Clinical classification of tuberculosis. Sections of the classification reflecting the type of tuberculosis process, the main clinical forms, characteristics of the tuberculosis process and its complications, clinical and dispensary categories of patient registration, effectiveness of treatment of tuberculosis patients, consequences of tuberculosis. Formulation of the diagnosis of tuberculosis according to the classification.	6
	4. Tuberculosis of peripheral lymph nodes: clinic, diagnosis. Main questions: Tuberculosis of peripheral lymph nodes. Clinic. Diagnostics. Treatment.	6
	5. Infection control for tuberculosis in medical and preventive institutions. Main questions: The concept of infection control and its scope of application. Components of infection control: administrative, engineering control, individual protection.	6
3	Preparation for the final modular control	6
	Total	54

Individual tasks

1. Analysis of practical (problem) situations regarding diagnosis, differential diagnosis, treatment and prevention of tuberculosis, writing scientific papers and presenting the results of own research at conferences.
2. Participation in olympiads in the academic discipline.

The list of theoretical questions for students' preparation for the final module control

1. The main epidemiological indicators of the prevalence of tuberculosis and their assessment.
2. The causative agent of tuberculosis, its types and forms of existence (L-forms), properties. The concept of persistence and reversion of *Mycobacterium tuberculosis*.
3. Epidemic process in tuberculosis: source of tuberculosis infection, routes of transmission, susceptible organisms. Groups at increased risk of tuberculosis.
4. Pathogenesis of tuberculosis.
5. Algorithm of actions of doctors of establishments of the general medical network concerning detection of tuberculosis at the address of patients for the help.
6. Symptoms that may indicate tuberculosis.
7. Method of sputum smear microscopy: role in the detection of tuberculosis, advantages and disadvantages.
8. Cultural study of sputum on a liquid and dense medium in the diagnosis of tuberculosis: the role in the detection of tuberculosis, advantages and disadvantages.
9. Xpert MTB / RIF method: features of application, indications, advantages and disadvantages, interpretation of results.
10. GenoType MTBDRplus method: features of application, indications, advantages and disadvantages, interpretation of results.
11. Methods of determination and types of drug resistance of the causative agent of tuberculosis.
12. Methods of radiological diagnosis of tuberculosis.

13. Mantoux test with 2 TO PPD-L: purpose of execution, technique of statement, estimation of results. "Turn" of tuberculin tests. Differential diagnosis of post-vaccination (BCG) and infectious immunity in children and adolescents.
14. Koch's test: the purpose of performance, technique of statement, an estimation of results.
15. Quantiferon test: purpose, advantages and disadvantages.
16. Instrumental and invasive methods in the diagnosis of tuberculosis.
17. Characteristics of the main anti-TB drugs (isoniazid, rifampicin, pyrazinamide, ethambutol). Side effects of anti-TB drugs.
18. Outbreaks of tuberculosis infection, their classification, criteria for determining the epidemiological danger of outbreaks of tuberculosis infection, anti-epidemic measures in the outbreak of tuberculosis infection.
19. Infection control for tuberculosis in medical and preventive institutions.
20. BCG vaccination: technique, contraindications, course after the vaccination period, complications.
21. Chemoprophylaxis of tuberculosis: types, indications, modes of appointment.
22. Clinical classification of tuberculosis.
23. Tuberculosis of unknown location: definition, pathogenesis, clinic, diagnosis.
24. Primary tuberculosis complex: definition, pathogenesis, clinic, diagnosis.
25. Tuberculosis of intrathoracic lymph nodes: definition, pathogenesis, clinic, diagnosis.
26. Disseminated pulmonary tuberculosis: definition, pathogenesis, clinic, diagnosis.
27. Miliary tuberculosis: definition, pathogenesis, features of the clinical course, diagnosis.
28. Tuberculosis of the nervous system and meninges: definition, pathogenesis, clinic, diagnosis.
29. Focal pulmonary tuberculosis: definition, classification, pathogenesis, clinic, diagnosis.
30. Infiltrative pulmonary tuberculosis: definition, pathogenesis, clinical and radiological variants of infiltrates, diagnosis.
31. Caseous pneumonia: definition, pathogenesis, clinic, diagnosis.
32. Tuberculoma: definition, classification, pathogenesis, clinic, diagnosis.
33. Fibrous-cavernous pulmonary tuberculosis: definition, pathogenesis, clinic, diagnosis.
34. Cirrhotic pulmonary tuberculosis: definition, pathogenesis, clinic, diagnosis.
35. Tuberculous pleurisy: definition, pathogenesis, clinic, diagnosis.
36. Emergency care for pulmonary hemorrhage.
37. Spontaneous pneumothorax: causes, clinic, diagnosis.
38. Emergency care for spontaneous pneumothorax.
39. Tuberculosis of the oral mucosa: clinic, diagnosis, features of treatment.
40. Tuberculosis of the bones of the upper and lower jaws: clinic, diagnosis, features of treatment.
41. Tuberculosis of peripheral lymph nodes: clinic, diagnosis.
42. Features of the course of tuberculosis on the background of HIV infection.
Diagnosis, treatment and prevention of tuberculosis in HIV-infected people.

The list of practical skills required for the final module control

1. Identify and identify the leading clinical symptoms and syndromes of tuberculosis.
2. Assess the condition of the maxillofacial organs.
3. According to standard methods, using the data of the anamnesis and examination of the patient, to establish a probable preliminary clinical diagnosis of tuberculosis.
4. Evaluate the results of laboratory, microbiological, radiation, histological methods for the diagnosis of tuberculosis.
5. Analyze the results of tuberculin tests and quantiferon test;
6. Carry out differential diagnosis of tuberculosis with other diseases of organs and tissues of the oral cavity and maxillofacial region.
7. To determine the tactics of the dental patient with pulmonary tuberculosis.
8. To determine the tactics of management of a patient with tuberculosis of the organs and tissues of the oral cavity and maxillofacial region.
9. Diagnose and provide emergency care in emergencies in patients with tuberculosis.

Teaching methods:

- verbal (lecture, explanation, story, conversation, thematic discussion, brainstorming, case method);
- visual (demonstration);
- practical (curation of patients, description of radiographs, interpretation of data of laboratory-instrumental diagnostic methods, solution of situational problems, simulation tasks).

Control methods:

- oral survey,
- written (test) control,
- software computer testing,
- performance of situational tasks,
- practical verification of the level of mastery of practical skills,
- self-control, self-assessment methods.

System of current and final control

Practical classes in the educational discipline "Physiology" are structured and involve comprehensive assessment of all types of educational activities performed by students. The criteria for evaluating the current educational activity and the final module control are brought to the attention of the students at the beginning of the study of the discipline (the first practical session).

At the initial stage of practical training, test control is carried out - at least 10 test tasks of the selective type with one correct answer. Its results are evaluated positively if the student gave at least 60% of the correct answers. In the overall evaluation of the current educational activity, this stage is 20%. In the first lesson, the test control is an input control of the level of knowledge of students.

At the main stage of the practical session, the student's knowledge of the theoretical material is assessed through an oral interview and practical work (examination of a tuberculosis patient):

- collection of complaints, medical and life anamnesis, epidemiological anamnesis; examination and physical examination of the patient (detection of pathological changes on the part of the examined organs);
- the ability to analyze and interpret the results of the patient's examination, the data of X-ray, laboratory and functional research methods;
- the ability to correctly substantiate the conclusions regarding the patient's diagnosis, prescribe a treatment regimen and determine the prognosis for the patient's life and recovery.

In the overall assessment of the current educational activity, this stage is 50%, provided that the skills of tuberculosis diagnosis are confidently demonstrated.

At the final stage of practical training, control of theoretical and practical training is carried out with the help of situational problems, which allows you to assess the degree of achievement of the educational goal. It is evaluated positively provided that the student correctly solves 60% of the tasks. In the overall assessment of the current educational activity, this stage is 30%.

The assessment of the student corresponds to the ratio established during the assessment of the level of formation of professional and general competences to the planned learning outcomes (in percentages). At the same time, standardized generalized criteria for evaluating the knowledge of higher education applicants (table 1) are used, presented in the "Regulations on the organization and methodology of evaluating the educational activity of higher education applicants at the Poltava State Medical University" (<https://www.pdmu.edu.ua/n-process/departement-npr/normativni-dokumenti>).

After the current lesson, preceding the final module control, the total evaluation of the current success rate for the module is converted from a traditional 4-point scale to a multi-point one (maximum 120 points). The conversion is carried out according to the following algorithm:

- the average grade of the student is calculated according to the traditional 4-point scale, obtained during the current classes (accurate to the hundredth of a point);
- in order to obtain a converted multi-point total assessment of current success for the module, the average assessment obtained on a traditional 4-point scale must be multiplied by a factor of 24. The exception is the case when the average assessment on a traditional 4-point scale is 2 points. In this case, the student receives 0 points on a multi-point scale;
- the average score of the current performance is calculated on the total number of classes in the module, and not on the ones actually attended by the student.

The unified table of correspondence of points for current success, points for the final module control and traditional four-point evaluation (table 2) is presented in the "Regulations on the organization and methodology of evaluating the educational activity of students of higher education at the Poltava State Medical University", appendix 1 (<https://www.pdmu.edu.ua/n-process/departement-npr/normativni-dokumenti>).

The **final module control** is carried out after completing the study of the module in the last lesson. Students who do not have missed lectures and practical sessions, have mastered the topics assigned for independent study, completed all types of educational tasks provided for in the curriculum, and while studying the module have scored a

number of points for the current educational activity, are admitted to the final module control. for the minimum (72 points).

If a student of higher education attended all practical classes, but did not score the minimum number of points for the current educational activity (average score - less than 3.0), he is not allowed to the final module control. In order to receive admission to the final module control, he needs to rewrite the unsatisfactory grades for the current educational activity.

Applicants of higher education who during the study of the module had an average score of current success from 4.50 to 5.0 are exempted from taking the final module control and automatically (upon consent) receive a final grade accordingly (table 2), while the presence of the applicant of higher education at the final modular control is mandatory. In the case of disagreement with the assessment, the specified category of higher education applicants makes the final module control according to general rules.

The control of the theoretical and practical training of the student during the final module control is carried out according to the following regulations:

1. Conducting a test control (within 20 minutes - performance of 20 test tasks of the selective type with one correct answer).

2. Solving two situational problems within 20 minutes.

Tasks for the final module control are standardized and aimed at monitoring the achievement of learning outcomes by the student. Tasks are checked by the teacher during the final module control as they are completed.

The result of the final module control is evaluated in points and cannot be converted into a traditional 4-point evaluation. The complex number of points that a higher education student gets based on the results of the final modular control has the following components:

1. Based on the results of the test control, the student can receive up to 60 points (1 correct answer – 3 points; 20 correct answers x 3 points = 60 points).

2. For correct answers to situational problems, a student can receive up to 20 points (1 correct answer – 10 points; 2 problems x 10 points = 20 points).

The maximum number of points that a student can score based on the results of the final module control is 80 points, the minimum is 50 points. The final module test is considered not passed if the student scored less than 50 points.

Under conditions of violation by the student of the rules of academic integrity (clause 2.2.5. "Rules of internal procedure for students of the Poltava State Medical University" (<https://www.pdmu.edu.ua/n-process/department-npr/normativni-dokumenti>)) evaluation results obtained during the preparation of the PMK are not credited to it and the grade "unsatisfactory" is given.

A student of higher education has the right to take and two retakes of the final module control. Final modular control is rewritten according to the regulations approved by the "Regulations on the Organization and Methodology of Evaluation of Educational Activities of Higher Education Applicants at the Poltava State Medical University" (<https://www.pdmu.edu.ua/n-process/department-npr/normativni-dokumenti>).

The final grade for the discipline consists of the sum of the points of current success and the points obtained for the final module control. The maximum number of

points for the module is 200 points (of which the student receives up to 120 points for current performance).

Methodological support

1. Methodical developments of lectures.
2. Methodological guidelines for the independent work of students during preparation for practical classes and in class.
3. Methodological guidelines for the independent work of students on the study of topics submitted for independent study.
4. Recommended literature.
5. Multimedia presentations.
6. Materials for monitoring the knowledge, abilities and skills of students (tests, tests from the bank of licensed exams "Step-2", situational tasks, radiographs and computer tomography of the chest organs, medical history; results of laboratory, bacteriological, instrumental and histological studies).

Recommended reading

Basic

1. Phthisiology : a teaching manual / B.F. Moskalenko, V.I. Petrenko, G.O. Timoshenko – Kiev: Medicina, 2012. – 216 p.
2. Phthisiology : textbook / V.I. Petrenko, O.K. Asmolov, M.G. Boyko [et al.] ; edited by V.I. Petrenko. – Kiev : AUS Medicine Publishing, 2015. – 416 p.

Supplementary

1. Tuberculosis : manuel for teacher, students and doctors / A.G. Yareshko, M.V. Kulish. – Poltava : Полтавський літератор, 2011. – 156 p.

Information resources

1. Child and Adolescent TB Training Course for Healthcare Workers: an Online Course. – Access mode: <https://coursesonline.theunion.org/theunion/2021/child-and-adolescent-tb-training-course-for-hcw/333811/faculty.presenter28s29.child.and.adolescent.tb.training.course.for.health.care.html>
2. WHO: tuberculosis. – Access mode: https://www.who.int/health-topics/tuberculosis#tab=tab_1

Developers

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