MINISTRY OF HEALTH OF UKRAINE
KHARKIV NATIONAL MEDICAL UNIVERSITY
Department of Phthisiology and Pulmonology
Year 2021-2022

SYLLABUS OF ACADEMIC DISCIPLINE
"Phthisiology"

Elective
Format: Mixed
Branch of knowledge 22 «Healthcare»
Specialty 222 «Medicine»
Educational and professional program «Current issues of pulmonology»
Second master's level of higher education
Course: 5

Approved
by the Council of the Department
of Phthisiology and Pulmonology

Protocol
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Head of the Department
_____ O.S. Shevchenko

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Approved by
Methodological Commission of KNMU on the problems of professional training of a therapeutic profile
Protocol
"31" August 2021 № 1

Head
_____ P.G. Kravchun

"31" August 2021

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Introduction

Syllabus of academic discipline "Current issues of pulmonology" is composed in accordance with Educational-Professional Program "Medicine" and the Project of Standard of Higher Education of Ukraine (hereinafter - the Standard) of the second (master's) level, branch of knowledge 22 «Health care», specialty 222 «Medicine»

Annotation: Course includes information about diagnosis, treatment and prophylaxis of the most common lung disease and emergency conditions which may complicate them.

Subject: pulmonary diseases

Interdisciplinary connections:

Pathological anatomy	Pathomorphology and pathogenesis of pneumothorax, hemoptysis and pulmonary hemorrhage, pleurisy, acute respiratory distress syndrome, pathomorphological changes in pleurisy, features of pathomorphology of pulmonary diseases that can lead to pneumothorax, pathomorphological mechanisms of hemoptysis and pulmonary hemorrhage
Pathological physiology	Mechanisms of pleurisy in pulmonary diseases, in particular, mechanisms of vascular damage in lung diseases that lead to hemoptysis and pulmonary hemorrhage, mechanisms of spontaneous pneumothorax
Propaedeutic of internal diseases	Methods of examination of patients with lung diseases. The main clinical syndromes of lung diseases. Mastering the skills of physical examination of the patient. Physical data in emergencies in a pulmonary clinic.
Internal medicine	The main nosological forms of lung diseases and their clinical manifestations. Clinical manifestations of emergencies in pulmonology
Radiology	Physical bases of the method of X-ray examination. Techniques used for the study of respiratory organs, their suitability, indications for use. Methods of reading chest X-rays. Radiological signs of pleurisy and pneumothorax
Pharmacology	Drugs used for emergency care in pleurisy, spontaneous pneumothorax, hemoptysis, acute respiratory distress syndrome
Epidemiology and hygiene	Frequency of emergencies in pulmonology
Public health and health management	The main indicators for emergencies: morbidity, mortality, etc.

Prerequisites: knowledge in microbiology, physiology and pathophysiology, radiology, pharmacology.

Postrequisits: the knowledge about pulmonary diseases will allow to make differential diagnosis between them in internal medicine as well as provide diagnosis and treatment

Moodle-link: http://distance.knmu.edu.ua/course/view.php?id=876

1. AIM AND TASKS

Aim: mastering basic knowledge of epidemiology, etiology, pathogenesis, clinic, diagnosis, treatment, prevention and emergency conditions in pulmonology

Tasks:

- formation of students' ability to determine main symptoms and syndromes of lung diseases;
- formation of students' ability to determine risk factors for lung diseases;
- students' mastering of modern methods of lung diseases diagnostics;

- formation of students' ability to diagnose complications of lung diseases and provide care in emergency conditions.

Competence and results of education:

– *integral:*

- Ability to solve typical and complex specialized problems and practical problems in professional activities in the field of health care or in the learning process, which involves research and / or innovation and is characterized by complexity and uncertainty of conditions and requirements.

– *general:*

- Ability to apply knowledge in practical situations
- Knowledge and understanding of the subject and understanding of the profession
- Ability to self-regulate and lead a healthy lifestyle, the ability to adapt and act in a new situation
- Ability to abstract thinking, analysis and synthesis, the ability to learn and be modernly trained
- Ability to evaluate and ensure the quality of work performed;
- Definiteness and perseverance in terms of tasks and responsibilities

– *special (professional, subject):*

- Ability to make a preliminary diagnosis of the disease
- Skills in gathering patient information
- Ability to evaluate the results of laboratory and instrumental research
- Ability to determine the principles and nature of disease treatment
- Ability to diagnose emergencies
- Ability to determine tactics for providing emergency medical care
- Emergency care skills
- Skills to perform medical manipulations
- Ability to determine the required regimen of work and rest in the treatment of the disease
- Ability to determine therapeutic nutrition in the treatment of diseases
- Ability to carry out sanitary and hygienic and preventive measures
- Ability to plan preventive and anti-epidemic measures
- Ability to carry out preventive and anti-epidemic measures
- Ability to keep medical records

Detailing of competencies according to descriptors in the form of "Competence Matrix".

Competence matrix

№	Competence	Knowledge	Skill	Communication	Autonomy and responsibility
Integral competence					
Ability to solve typical and complex specialized problems and practical problems in professional activities in the field of health care or in the learning process, which involves research and / or innovation and is characterized by complexity and uncertainty of conditions and requirements.					
General competencies					
1.	Ability to apply knowledge in practical situations	Specialized conceptual knowledge acquired in the learning process.	Be able to solve complex problems and problems that arise in professional activities.	Clear and unambiguous communication of own conclusions, knowledge and explanations that substantiate them to specialists and non-specialists.	Responsible for making decisions in difficult conditions
2.	Knowledge and understanding of the subject and understanding of the profession	Deep knowledge of the structure of professional activity.	Be able to carry out professional activities that require updating and integration of knowledge.	Ability to effectively form a communication strategy in professional activities	To be responsible for professional development, ability to further professional training with a high level of autonomy.
3.	Ability to self-regulate and lead a healthy lifestyle, the ability to adapt and act in a new situation	Ways to self-regulate, lead a healthy life.	Be able to apply methods of self-regulation, be able to lead a healthy lifestyle and adapt to new situations (circumstances) of life and activity.	Establish appropriate connections to achieve results.	Be responsible for a healthy lifestyle and timely use of self-regulation methods.
4.	Ability to abstract thinking, analysis and synthesis, the ability to learn and be modernly trained	Methods of analysis, synthesis and further modern learning	Be able to analyze information, make informed decisions, be able to acquire modern knowledge	Establish appropriate connections to achieve goals.	Be responsible for the timely acquisition of modern knowledge.
5.	Ability to evaluate and ensure the quality of work performed	Methods for estimating the quality of activities.	Be able to ensure quality work.	Establish connections to ensure quality work.	Be responsible for the quality of work.

6	Definiteness and perseverance in terms of tasks and responsibilities	Responsibilities and ways to accomplish the tasks	Be able to set goals and objectives to be persistent and conscientious in the performance of duties	Establish interpersonal relationships to effectively perform tasks and responsibilities	To be responsible for the quality implementation of the tasks
Special (professional, subject) competencies					
1.	Ability to make a preliminary diagnosis of the disease	Specialized knowledge about human, organs and systems; knowledge of standard investigation methods; disease diagnosis algorithms; algorithms for determining leading symptoms or syndromes; previous and clinical diagnoses; knowledge of methods of laboratory and instrumental examination; knowledge of human condition assessment.	Be able to perform a physical examination of the patient; be able to make an informed decision about the leading symptom or syndrome; be able to make a preliminary diagnosis of the disease; to appoint laboratory and instrumental examination of the patient by application of standard techniques	On the basis of normative documents, to keep medical documentation concerning the patient (card of the outpatient / inpatient, etc.).	According to ethical and legal norms, be responsible for making informed decisions and actions regarding the correctness of the preliminary diagnosis
2.	Skills in gathering patient information	Specialized knowledge about the human, organs and systems, methods and standard schemes of questioning and physical examination of the patient.	Be able to provide a conversation with the patient (including the child); based on algorithms and standards, using standard techniques to perform a physical examination of the patient. Be	Enter information about the state of health of the person, the child in the relevant medical records	Be responsible for the quality collection of information received, based on interviews, examinations, palpation, percussion of organs and systems and timely assessment of human health

			able to assess the state of human health (including children).		and taking appropriate measures
3.	Ability to evaluate the results of laboratory and instrumental research	Specialized knowledge about the human, organs and systems, standard methods of laboratory and instrumental research.	Be able to analyze the results of laboratory and instrumental studies and to evaluate information about the patient's diagnosis	Assign and evaluate the results of laboratory and instrumental research	Be responsible for deciding on the evaluation of laboratory and instrumental research results
4.	Ability to determine the principles and nature of disease treatment	Specialized knowledge of algorithms and standard schemes of disease treatment	Be able to determine the principles and character of treatment of the disease	To form and convey to the patient and specialists conclusions about the principles and character of treatment	Be responsible for deciding on the principles and character of treatment of the disease
5.	Ability to diagnose emergencies	Specialized knowledge about the human, organs and systems, standard methods of examination (at home, on the street, in a health care facility) in the absence of information.	Be able, in the absence of information, using standard techniques, to assess the human condition and make a diagnosis.	Under any circumstances, adhering to the relevant ethical and legal norms, to make a decision on the assessment of the human condition, diagnosis and organization of the necessary medical measures depending on the human condition; fill in the relevant medical documents.	Be responsible for the timeliness and effectiveness of medical measures to diagnose emergencies.
6.	Ability to determine tactics for providing emergency medical care	Legal framework for the provision of emergency medical care; specialized knowledge about urgent human conditions; principles of emergency medical care.	Be able to identify emergencies; principles and tactics of emergency medical care; to carry out organizational and diagnostic measures aimed at saving human life.	Formulate and convey to the patient or his / her legal representative the need for emergency care and to obtain consent for medical intervention.	To be responsible for the correctness of determining the emergency condition, its severity and tactics of emergency medical care.
7.	Emergency care skills	Specialized knowledge	Be able to provide	Explain the need for emergency medical care.	Be responsible for the

		about the structure of the human body, its organs and systems; algorithms for providing emergency medical care.	emergency medical care.		timeliness and quality of emergency medical care.
8.	Skills to perform medical manipulations	Specialized knowledge about human, organs and systems; knowledge of algorithms for performing medical manipulations.	To be able to perform medical manipulations	To form and convey to the patient, specialists conclusions about the need for medical manipulations	Be responsible for the quality of medical manipulations
9.	Ability to determine the required regimen of work and rest in the treatment of the disease	Specialized knowledge about human, organs and systems; knowledge of ethical and legal norms; knowledge of algorithms and standard schemes for determining the regimen of work and rest during treatment, based on a preliminary diagnosis	On the basis of a preliminary diagnosis, to be able to determine the regimen of work and rest in the treatment of the disease	To form and communicate to the patient and specialists the conclusions about the necessary regimen of work and rest in the treatment of the disease	To be responsible for the validity of the appointment of work and rest regimen in the treatment of the disease
10.	Ability to determine therapeutic nutrition in the treatment of diseases	Specialized knowledge about human, organs and systems; knowledge of algorithms and standard schemes of medical nutrition in the treatment of the disease	On the basis of a preliminary diagnosis, to be able to determine the character of therapeutic nutrition in the treatment of the disease	To form and communicate to the patient and specialists the conclusions about therapeutic nutrition in the treatment of the disease	To be responsible for the validity of the appointment of therapeutic nutrition in the treatment of the disease

11.	Ability to carry out sanitary and hygienic and preventive measures	The system of sanitary-hygienic and preventive measures among the fixed contingent of the population. The principles of medical examination of different groups of the population. The indicators of evaluation of the organization and effectiveness of medical examination. The methodological approaches for assessing the state of the environment and the presence of factors that affect the health of the population in these conditions. The principles of nutrition, water supply, regimens of activity and rest; principles and methods of promoting a healthy lifestyle	Be able to form groups of different contingents of the population for their medical examination. Be able to make a plan for medical examination of different groups of the population. Have the skills to organize medical examinations of relevant contingents. Have the skills to analyze the health of groups based on the results of medical examinations and the development of medical and preventive measures. Be able to organize the promotion of a healthy lifestyle, primary prevention of diseases and injuries.	Based on the results of medical examination and analysis of the state of health of the population, the state of environment, to know the principles of submission of analytical information to local government and health care services; heads of industrial enterprises, to carry out measures to eliminate harmful effects on public health. Use the local press for publications on health promotion and environmental improvement, use of radio, television, lectures and interviews.	To be responsible for timely and high-quality measures to assess the health of the population, measures to improve the health of the relevant contingents, improve the environment, promote a healthy lifestyle.
12.	Ability to plan preventive and anti-epidemic measures	Principles and systems of planning preventive and anti-epidemic measures for infectious diseases in	Be able to plan measures to prevent the spread of infectious diseases on the basis of epidemiological	Inform the population, heads of relevant institutions and enterprises about the timely implementation of preventive and anti-epidemic measures, vaccinations, etc.	To be responsible for the qualitative analysis of indicators of infectious morbidity of the population,

		typical conditions and in conditions of epidemic distress based on the results of the analysis, the survey data of the center of infectious diseases. Preventive and anti-epidemic methods of organizing measures to prevent the spread of infectious diseases.	analysis, using preventive and anti-epidemic methods		timely carrying out of the corresponding preventive and anti-epidemic measures.
13.	Ability to carry out preventive and anti-epidemic measures	Principles of organizing and conducting a system of preventive and anti-epidemic measures for infectious diseases and preventing their spread in typical conditions and during the exacerbation of the epidemic situation. Methods of detection and early diagnosis of infectious diseases, the organization of primary anti-epidemic measures in the center of infectious diseases.	Be able to organize preventive and anti-epidemic measures for infectious diseases in health care facilities, among the population and in infectious disease centers on the basis of epidemiological analysis by risk groups, risk areas, time and risk factors.	Inform the heads of health care facilities, local authorities about the epidemic situation and the need for timely and high-quality preventive and anti-epidemic measures in health care facilities, among the population and in the centers of infectious diseases.	To be responsible for the quality and timeliness of early diagnosis of infectious diseases, the organization of effective preventive and anti-epidemic measures to prevent the spread of infectious diseases.
14.	Ability to keep medical records	System of official document	Be able to determine the source and	Obtain the necessary information from a specific source, analyze	Be responsible for the completeness

		management in the professional work of a doctor, including modern computer information technology	location of the required information depending on its type; Be able to process information and analyze the information obtained	it and form appropriate conclusions	and quality of the analysis of information and conclusions based on its analysis.

Education results:

Integrative final program learning outcomes, the formation of which is facilitated by the discipline.

Learning outcomes for the discipline.

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.

2. INFORMATION SCOPE OF THE COURSE

<table>
<tr><td rowspan="2">Parameters</td><td rowspan="2">Field of knowledge, direction of training, educational and qualification level</td><td>Characteristics</td></tr>
<tr><td>full-time day education</td></tr>
<tr><td>Credits – 3</td><td>Training direction
22 «Health care»
(code and name)</td><td>Elective</td></tr>
<tr><td rowspan="3">Hours - 90</td><td rowspan="3">Specialty:
222 «Medicine»
(code and name)</td><td>Year:</td></tr>
<tr><td>5th</td></tr>
<tr><td>Semester</td></tr>
</table>

		9th or 10th
		Lectures
Hours for full-time day study: auditory – 20 self-work - 70	Educational and qualification level: the second (master's) level	-
		Practical, seminar
		20 hours
		Laboratory
		-
		Self-work
		70 hours
		Individual tasks: -
		Type of control: credit

Practical classes

№	Topic	Hours
1	Topic 1. Hemoptysis and pulmonary hemorrhage. Etiology, pathogenesis, classification, clinical manifestations, first aid, treatment and prophylaxis	5
2	Topic 2. Spontaneous pneumothorax. Etiology, pathogenesis, classification, clinical manifestations, first aid, treatment and prevention.	5
3	Topic 3. Spontaneous pneumothorax. Etiology, pathogenesis, classification, clinical manifestations, first aid, treatment and prevention.	5
4	Topic 4. Acute Respiratory Distress Syndrome. Credit	5
Total		20

8. Self-work

№	Topic	Hours
1	Pneumonia	5
2	Chronic obstructive pulmonary disease	5
3	Asthma	5
4	Functional examination of respiratory system	5
5	Differential diagnosis of hilar lymphadenopathies	5
6	Differential diagnosis of pulmonary infiltration	5
7	Differential diagnosis of round shadows	5
8	Differential diagnosis of limited focal shadows	5
9	Differential diagnosis of pulmonary dissemination	5
10	Differential diagnosis of cavities (ring shadows) in the lungs	5
11	Sarcoidosis	5
12	Differential diagnosis of pleural effusions	5
13	Pulmonary thromboembolism	5
14	Respiratory viral infections	5
Total		70

Teaching methods: explanation, conversation, lecture, illustration, demonstration, presentation, videos, discussion, round table, role-playing, simulation game, modeling of processes and situations, delegation of authority, case method, project method, debate, "Brainstorm", sparring partnership (pair training), standardized patient

Control methods:

Current control: oral examination; written survey; test control; creative tasks; individual tasks; report; writing a case history.

3. EVALUATION CRITERIA

3.1. Evaluation rules

When assessing student's work at each practical and final lesson, the student is given mark on a 4-point scale.

The final score is determined as the arithmetic mean of the marks for each lesson, rounded to 2 decimal places, and converted into a multi-point scale according to Table 1.

Table 1 Converting the average mark to a multi-point scale

4-point scale	200-point scale	4-point scale	200-point scale	4-point scale	200-point scale
5	200	4.22-4,23	169	3.45-3,46	138
4.97-4,99	199	4.19-4,21	168	3.42-3,44	137
4.95-4,96	198	4.17-4,18	167	3.4-3,41	136
4.92-4,94	197	4.14-4,16	166	3.37-3,39	135
4.9-4,91	196	4.12-4,13	165	3.35-3,36	134
4.87-4,89	195	4.09-4,11	164	3.32-3,34	133
4.85-4,86	194	4.07-4,08	163	3.3-3,31	132
4.82-4,84	193	4.04-4,06	162	3.27-3,29	131
4.8-4,81	192	4.02-4,03	161	3.25-3,26	130
4.77-4,79	191	3.99-4,01	160	3.22-3,24	129
4.75-4,76	190	3.97-3,98	159	3.2-3,21	128
4.72-4,74	189	3.94-3,96	158	3.17-3,19	127
4.7-4,71	188	3.92-3,93	157	3.15-3,16	126
4.67-4,69	187	3.89-3,91	156	3.12-3,14	125
4.65-4,66	186	3.87-3,88	155	3.1-3,11	124
4.62-4,64	185	3.84-3,86	154	3.07-3,09	123
4.6-4,61	184	3.82-3,83	153	3.05-3,06	122
4.57-4,59	183	3.79-3,81	152	3.02-3,04	121
4.54-4,56	182	3.77-3,78	151	3-3,01	120
4.52-4,53	181	3.74-3,76	150	**<3**	**Unsatisfactory**

4.5-4,51	180	3.72-3,73	149
4.47-4,49	179	3.7-3,71	148
4.45-4,46	178	3.67-3,69	147
4.42-4,44	177	3.65-3,66	146
4.4-4,41	176	3.62-3,64	145
4.37-4,39	175	3.6-3,61	144
4.35-4,36	174	3.57-3,59	143
4.32-4,34	173	3.55-3,56	142
4.3-4,31	172	3.52-3,54	141
4,27-4,29	171	3.5-3,51	140
4.24-4,26	170	3.47-3,49	139

The evaluation of the results of the study of the discipline is carried out directly during the last lesson. The grade for the discipline is min - 120, max - 200. The correspondence of grades on a 200-point scale to a four-point scale and the ECTS scale is shown in Table 2.

Table 2. The correspondence of grades on a 200-point scale to a four-point scale and the ECTS scale

200-point scale	ECTS scale	4-point scale
180–200	A	Excellent
160–179	B	Good
150–159	C	Good
130–149	D	Satisfactory
120–129	E	Satisfactory
< 120	F, Fx	Unsatisfactory

3.2. Questions:

1. What is ARDS?
2. What is the etiology of ARDS?
3. What is the pathogenesis of ARDS?
4. What are the risk-factors of ARDS?
5. What is the clinical presentation of ARDS?
6. Which diagnostic measures of ARDS do you know?
7. What is the treatment of ARDS
8. What is the differential diagnosis of ARDS?
9. What are the complications of ARDS treatment?
10. What is hemoptysis?
11. What is lung hemorrhage?
12. What are patient’s complaints with hemoptysis and lung hemorrhage?
13. What is heard over the percussion at lung hemorrhage?
14. What is heard over the auscultation at lung hemorrhage?

15. What classification of lung hemorrhage do you know?
16. Which investigation is the most sensitive for detection of the source of hemoptysis and lung hemorrhage?
17. What is the treatment of hemoptysis and lung hemorrhage?
18. What is the differential diagnosis of lung hemorrhage?
19. Which lung hemorrhage is fatal?
20. With which diseases hemoptysis and lung hemorrhage occurs frequently.
21. What is the normal function of pleural fluid?
22. What are patient's complaints with exudative pleurisy?
23. What is heard over the percussion at exudative pleurisy?
24. What is heard over the auscultation at exudative pleurisy?
25. Which type of effusion is typical for TB pleurisy?
26. Which investigation is the most sensitive for detection of pleural effusion?
27. Which mechanism is responsible for the accumulation of pleural fluid due to pneumonia?
28. What are complications of diagnostic thoracentesis?
29. Which diseases can be accompanied by pleurisy?
30. What is spontaneous pneumothorax?
31. What are patient's complaints with spontaneous pneumothorax?
32. What is heard over the percussion at spontaneous pneumothorax?
33. What is heard over the auscultation at spontaneous pneumothorax?
34. Which types of spontaneous pneumothorax do you know?
35. What is peurodesis?
36. Which investigation is the most sensitive for detection spontaneous pneumothorax?
37. What is the treatment of spontaneous pneumothorax?
38. What are the complications of spontaneous pneumothorax?
39. Which diseases can be complicated by spontaneous pneumothorax?

3.3. Tasks for self-work:

1. Enumerate the main principles of TB patient treatment.
2. Differential diagnosis of extrapulmonary tuberculosis.
3. Differential diagnosis of tuberculosis in patients co-infected with HIV / TB.
4. What causes a restrictive and obstructive type of ventilation disorder?
5. What are the variants of lung damage in sarcoidosis?
6. Which diseases should be included in the differential diagnosis of pulmonary infiltrate?
7. Which diseases are accompanied by globular (round) shadow syndrome?
8. What are clinical and X-ray manifestations of focal pneumonia?
9. What is pulmonary dissemination syndrome?
10. Methods of X-ray diagnosis used in phthisiology.
11. What X-ray syndromes of tuberculosis do you know?
12. What is the normal function of pleural fluid?
13. What are complications of diagnostic thoracentesis?
14. Which diseases can be accompanied by pleurisy?

3.4. Individual tasks: 1). Preparation of a literature review or research (by choice or arrangement with a teacher). 2). Clinical analysis of a patient. 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.

3.5. Other tasks: making a presentation, writing an abstract, participation in students' scientific conference

3.6. Rules for appealing the assessment

The mark can be appealed in accordance with the Order of KNMU No. 252 dated 09/30/2020 "Regulations on the appeal of the results of the final control of applicants for education at Kharkiv National Medical University"
http://www.knmu.kharkov.ua/index.php?option=com_content&view=article&id=1226:20;&Itemid=&lang=uk

4. COURSE POLICY

To obtain a positive total mark, the student must attend all 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.

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 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**.**

5. ACADEMIC INTEGRITY

The system of academic integrity development has been introduced at the university
About academic integrity
Order №305 of 27.08.19 on the organization of the educational process in KhNMU
Code of Academic Integrity of KhNMU
Order № 165 of 02.07.2020 on measures to develop the system of academic integrity in KhNMU
Plan
Regulations on academic integrity
Regulations on the Group for the Promotion of Academic Integrity of KhNMU
Regulations on the Commission on Academic Integrity, Ethics and Conflict Management of KhNMU
Order № 195 of 27.08.2020 on approval of the Regulations on the procedure for checking in KhNMU text documents of dissertations, reports on research papers, scientific publications, materials of scientific forums, educational literature, educational publications and teaching aids for the presence of textual borrowings
Regulations on the Procedure for Checking Text Documents at KhNMU - Dissertations, Reports on Research Papers, Scientific Publications, Materials of Scientific Forums, Educational Literature, Educational and Methodological Publications and Teaching Aids for Textual Borrowings

6. LITERATURE

Main literature:

1. Essentials in Clinical Pulmonology. P.L. Shah, F.J.F. Herth, Y.C.G. Lee, G.J Criner. 2018. ISBN 9780367571023
2. Interpretation of Pulmonary Function Tests by Paul D. Scanlon. 2019. ISBN: 9781975114343
3. Principles of Pulmonary Medicine. S.E. Weinberger**,** B.A. Cockrill**,** J. Mandel. 2018. ISBN-13: 978-0323523714
4. Advances in Interventional Pulmonology (Frontiers in Respiratory Medicine Book 1). A.

Musani, H. Dutau. 2017. ISBN: 9781681085920
5. Rapid On-Site Evaluation in Diagnostic Interventional Pulmonology. J. Feng, W. Ning, G. Chen. 2020. ISBN-10: 9811509387

Additional literature:

1. Clinical Examination and Applied Medicine, Volume I. M. Haroon. 2019. ISBN-13: 9781947083011
2. Interventions in Pulmonary Medicine. J.P. Díaz-Jimenez, A.N. Rodriguez. 2017. ISBN-13: 978-3319580357
3. Felson's Principles of Chest Roentgenology, ed. 5 by Lawrence R. Goodman 2020. ISBN: 9780323625678
4. Principles of Pulmonary Medicine by S.E. Weinberger; B.A. Cockrill; J. Mandel. 2018. ISBN: 9780323523714
5. Clinical Practice Manual for Pulmonary and Critical Care Medicine by Judd Landsberg. 2018. ISBN: 9780323399524

7. INFORMATIONAL RESOURCES

1. http://distance.knmu.edu.ua/course/view.php?id=876
2. http://knmu.kharkov.ua/index.php?option=com_content&view=article&id=243%3A2011-05-19-12-40-16&catid=7%3A2011-05-05-09-09-08&Itemid=27&lang=uk
3. https://www.who.int/health-topics/chronic-respiratory-diseases#tab=tab_1
4. https://www.cdc.gov/niosh/respiratory/health.html