# Kharkiv National Medical University

# The VI Faculty for International Students of KhNMU Education and Research Institute for Foreign Nationals

# Department of Propedeutics to Internal Medicine #1, Fundamentals of Bioethics and Biosafety

Educational program for training specialists of the second (master's) level

of higher education 22 "Health care"

# in specialty 222 "Medicine"

**SYLLABUS OF THE COURSE**

**Elective discipline**

**INSTRUMENTAL METHODS OF INVESTIGATION IN PULMONOLOGY. EVALUATION OF THE FUNCTION OF EXTERNAL BREATHING**

**4th year**

|  |  |
| --- | --- |
| The syllabus of the discipline was approved at the meeting of the department of Propedeutics to Internal Medicine #1, Fundamentals of Bioethics and Biosafety  Protocol from  “ 27 ” August 2020 № \_15\_  Head of the Department  Ashcheulova T. V  (signature) (surname and initials)  “ 27 ” August 2020 | Approved by the methodical commission on problems of Professional Educational in therapeutic profile of KhNMU  Protocol from  “ 31 ” August 2020 № \_1\_  Head  professor Kravchun P.G. (signature) (surname and initials)  “ 31 ” August 2020 |

Kharkiv 2020

**Developers:** Ashcheulova Tetiana Vadymivna,

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**Teachers:**

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# Information about teachers:

# Ashcheulova Tetiana Vadymivna – Doctor of Medical Science, Professor of Department of Propedeutics to Internal Medicine #1, Fundamentals of Bioethics and Biosafety, specialization "Therapy", "Cardiology", "Pulmonology".

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**Consultations:** by prior arrangement with the teacher.

**Online consultations**: Moodle system, ZOOM system according to the schedule

**Location:** classes are held in the Municipal Non-Profit Enterprise "City Clinical Hospital № 13" of the Kharkiv City Council, Military Medical Clinical Center of the Northern Region, remotely - in ZOOM or MOODLE systems

# Discipline information

|  |  |  |  |
| --- | --- | --- | --- |
| Name of indicators | Area of knowledge, direction of training, educational qualification level | Characteristic of the discipline | |
| **full-time education** | |
| Number of credits – 3 | Training direction: 22 Health Care (code and name) | Normative | |
| The total number of hours - 90 | Specialty: 222 «Medicine» (code and name) | **Year of the education:** | |
| 4 | |
| **Semester** | |
|  |  |
| **Lectures** | |
| Hours for full-time study: classroom - 30 independent student work  - 60 | Education level: Second (Master's level) | 0 hours | 0 hours |
| **Practical classes** | |
| 30 hours | |
| Laboratory | |
| 0 hours | |
| Individual work | |
| 60 hours | |
| **Independent work** | |
| 0 hours | |
| Type of control:  Differential credit | |

Syllabus of the discipline "Instrumental research methods in pulmonology. Assessment of the function of external respiration "(elective course) is made for the educational-professional program" Medicine "of the second (master's) level of higher education.

The course program determines the prerequisites for access to education, orientation and main focus of the program, the amount of ECTS credits required for a master's degree, a list of general and special (professional) competencies, normative and variable content of training, formulated in terms of learning outcomes and control requirements quality of higher education.

The department accepts qualified students of any race, national or ethnic origin, gender, age, people with special needs, any religion, sexual orientation, gender, veteran status or marital status for all rights, privileges, programs and activities, provided to university students.

Reference to the video annotation of the discipline (if any), etc.

Moodle discipline page (if available)

**Description of the discipline (Annotation).**

"Instrumental research methods in pulmonology. Assessment of the function of external respiration "is a selective discipline of the clinical stage of undergraduate training of doctors, the study of which allows students to master the general principles of using diagnostic methods such as spirometry, peak flowmetry and the basics of their use to diagnose pulmonary diseases. Thus, the Fundamentals of instrumental research methods in pulmonology. Assessment of the function of external respiration is an educational clinical discipline that studies the physical foundations of ultrasound in medicine, ultrasound anatomy of the heart and blood vessels, methods and techniques of ultrasound examination of the cardiovascular system, ultrasound manifestations of certain diseases of the cardiovascular system.

The organization of the educational process is carried out according to the requirements of the European credit transfer system of the educational process, which is based on determining the educational load of the higher education student required to achieve certain learning outcomes and is accounted for in ECTS credits. The amount of one loan is 30 hours. The workload of one academic year is usually 60 ECTS credits. To study the discipline "Instrumental research methods in pulmonology. Assessment of the function of external respiration "is given 90 hours - 3.0 ECTS credits, 24 hours of which is classroom training (in the form of practical classes - 24 hours) and 66 hours - independent work of students

The subject of the discipline "Instrumental research methods in pulmonology. Assessment of the function of external respiration "includes the study of concepts, principles, research methods, methodological approaches to instrumental research in pulmonology, as well as spirometric semiotics of the most common diseases of the pulmonary system. During the study of the discipline the practical application and significance of diagnostic methods with evaluation of research results are given and demonstrated.

Interdisciplinary connections: according to the curriculum, study of the discipline "Instrumental research methods in pulmonology. Assessment of the function of external respiration "is carried out in \_\_\_\_\_\_\_\_\_ semesters, after mastering the student's knowledge of certain sections of biological physics, bioorganic and biological chemistry, human anatomy, pathomorphology, physiology and pathophysiology and integrates with these disciplines. In turn, the discipline "Instrumental research methods in pulmonology. Assessment of external respiration "contributes to a deeper understanding of the basics of instrumental diagnosis of diseases of the pulmonary system in the study of the following clinical disciplines - internal medicine, family medicine, oncology, anesthesiology and intensive care, providing integration with these disciplines and the ability to apply ultrasound in the patient. further training and professional activities.

**1. The purpose and objectives of the discipline**

1.1. The purpose of teaching the discipline "Instrumental research methods in pulmonology. Assessment of the function of the external respiratory system "is the formation of the student's basics of clinical thinking and the acquisition of professional competencies in the examination of a patient with pulmonary pathology. Provide knowledge and ability to correctly interpret the results of instrumental studies of the lungs in various diseases of the pulmonary system.

1.2. The main tasks of studying the discipline "Instrumental investigation methods in pulmonology. Assessment of the function of external respiration " is:

- Mastering by the student of the theoretical knowledge necessary for performance of instrumental methods of diagnostics in pulmonology

- Mastering the practical techniques and methods of instrumental examination of patients

- Mastering the semiotics of instrumental research of common diseases of the human pulmonary system

1.3. Competences and learning outcomes, the formation of which is facilitated by the discipine**.**

Discipline ensures the acquisition of students

**competencies:**

***-****integral:*

ability to solve typical and complex specialized tasks and practical problems in professional activity in the field of health care, or in the process of training, which involves research and / or innovation and is characterized by complexity and uncertainty of conditions and requirements.

– *general:*

1. Ability to abstract thinking, analysis and synthesis.

2. Definiteness and perseverance in terms of tasks and responsibilities

3. Ability to apply knowledge in practical situations.

4. Knowledge and understanding of the subject area and understanding of professional activity.

5. Ability to adapt and act in a new situation.

6. Ability to make informed decisions.

7. Skills in the use of information and communication technologies.

– *special (professional, subject):*

1. Ability to establish a syndromic diagnosis of the disease.

2. Ability to diagnose emergencies.

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

4. Ability to keep medical records.

Also, the study of this discipline forms in students social skills (soft skills): communication (implemented through: the method of working in pairs and groups, brainstorming, self-presentation method), teamwork (implemented through: the project method, openwork saw), management (implemented through: dramatization method, game methods), time management (implemented through: project method, group work, training), leadership skills (implemented through: group work, project method, self-presentation method).

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

**Competence matrix**

| **№** | **Competence** | **Knowledge** | **Skills** | **Communication** | **Autonomy and responsibility** | |
| --- | --- | --- | --- | --- | --- | --- |
| **Integral competence** | | | | | |
| 1. | Ability to solve typical and complex specialized problems and practical problems in a professional health care activity, or in a learning process that involves research and / or innovation and is characterized by the complexity and uncertainty of conditions and requirements. | | | | |
| **General competencies** | | | | | |
|  | Ability to abstract thinking, analysis and synthesis, the ability to learn and be modernly trained | Know the methods of analysis, synthesis and further modern training, current trends in the industry and analyze them | Be able to analyze information, make informed decisions, be able to acquire modern knowledge, analyze professional information, make informed decisions, acquire modern knowledge | Establish appropriate connections to achieve goals. | Be responsible for the timely acquisition of modern knowledge. | |
|  | Ability to apply knowledge in practical situations | Have 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 | |
|  | Knowledge and understanding of the subject area and understanding of professional activity | Have 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. | |
|  | Ability to adapt and act in a new situation. | Know the types and methods of adaptation, principles of action in a new situation | Be able to apply means of self-regulation, be able to adapt to new situations (circumstances) of life and activity. | Establish appropriate connections to achieve results. | Be responsible for the timely use of self-regulatory methods. | |
|  | Ability to make an informed decision, work in a team, interpersonal skills | Know the tactics and strategies of communication, laws and methods of communicative behavior, laws and methods of interpersonal interaction | Be able to make informed decisions, choose ways and strategies of communication to ensure effective teamwork; be able to choose ways and strategies of communication for interpersonal interaction | Use communication strategies and interpersonal skills | Be responsible for the choice and tactics of communication | |
|  | Ability to communicate in the state language both orally and in writing. | Have a perfect knowledge of the state language | Be able to apply knowledge of the state language, both orally and in writing | Use the state language in professional and business communication and in the preparation of documents. | To be responsible for fluency in the state language, for the development of professional knowledge. | |
|  | Skills in the use of information and communication technologies | Have deep knowledge in the field of information and communication technologies used in professional activities | Be able to use information and communication technologies in the professional field, which requires updating and integration of knowledge. | Use information and communication technologies in professional activities | Be responsible for the development of professional knowledge and skills. | |
| **Special (professional) competencies** | | | | | |
| 1. 1 | PC1 Survey skills | Have specialized knowledge about the person, his organs and systems, know the standard survey schemes | Be able to conduct a conversation with the patient, his examination on the basis of algorithms and standards. | Effectively form a communication strategy when communicating with the patient.  Enter information about the state of human health in the relevant medical records | Be responsible for the quality collection of information received on the basis of interviews, surveys, surveys and for timely assessment of the general health of the patient | |
| 1. 2 | PC 2 Ability to determine the required list of laboratory and instrumental studies and evaluate their results | Have specialized knowledge about the person, his organs and systems, standard methods of laboratory and instrumental research defined by the program. | Be able to analyze the results of laboratory and instrumental studies and on their basis to assess information about the patient's condition | Form and communicate to the patient and specialists the necessary conclusions  list of laboratory and instrumental research | Be responsible for deciding on the evaluation of laboratory and instrumental research results | |
|  | PC 4 Ability to determine the required mode of work and rest, the nature of nutrition in the treatment of diseases; | Have specialized knowledge about man, his organs and systems; ethical norms; algorithms for ensuring the mode of stay in the hospital during treatment during treatment | To be able to provide the necessary mode of work and rest determined by the doctor, and also a food mode at treatment of a disease | To inform the patient and specialists about the necessary mode of stay in the hospital, modes of work and rest, as well as nutrition in the treatment of the disease | To be responsible for ensuring the conditions of observance of the prescribed by the doctor mode of work and rest, as well as compliance with the diet and method of eating in the treatment of the disease | |
| 1. 3 | PC 6 Ability to diagnose emergencies | Have specialized knowledge about the structure of the human body, its organs and systems; algorithm for providing emergency medical care in emergencies (cardiac and respiratory arrest, bleeding). | Be able to diagnose emergencies | Explain the procedure or algorithm of emergency diagnostic measures. | Be responsible for the ability to detect emergencies | |

**3.** **Discipline status: selective;**

The format of the discipline is mixed - a discipline that is accompanied by the Moodle system, teaching the discipline, combines traditional forms of classroom learning with elements of distance learning, which uses available interactive information technology (ZOOM, Moodle), face-to-face and distance counseling.

**4. Teaching methods.**

Clinical (curation of patients with pulmonological profile), phantom, electronic information (presentations, video materials, methodical recommendations, lectures), scientific (participation in scientific developments in the discipline), control (tests, situational tasks, assessment of practical skills) are used for conducting classes. , protection of a clinical case).

**5. Recommended Books**

**Basic**

1. Ilashchuk TO, Bachuk-Ponych NV, Vasyuk VL, Mikulets LV Methods of research of respiratory organs. - Chernivtsi. -2018. -192 s.

2. Sabadash VE Diseases of the respiratory system. Selected issues of diagnosis and treatment for a family doctor: textbook; Nat. honey. Univ. O.O. Bogomolets of the Ministry of Health of Ukraine. - Kyiv: Medix, 2016. - 119 p.

3. Svintsitsky AS Methods of diagnosis in the clinic of internal medicine: textbook. way. for interns and medical students. lock higher education / AS Svintsitsky. Kyiv: Medicine, 2019. - 1007 p.

4. Vyshnivetsky II, Shvets EM Spirometry: simple and accessible on the diagnosis of disorders of pulmonary ventilation. - «MS», -2016. -80 sec.

5. Struchkov PV, Drozdov DV, Lukina OF Spirometry: a guide for doctors. 3rd edition. Moscow: GEOTAR-Media. - 2020. -112 c

6. Polyanskaya, MA Spirometry in questions and answers [Text] / Polyanskaya MA // Medical newspaper "Health of Ukraine". - 2009.– No 2/1. - P. 38–39.

**Additional**

1. European Respiratory Society [– e-learning](https://www.ers-education.org) : [Spirometry](https://spirxpert.ers-education.org/en/spirometry/) /електронний доступ: <https://spirxpert.ers-education.org/en/spirometry/welcome-to-spirxpert/>
2. **K. McCarthy.** Pulmonary Function Testing: Medscape Education / електронний доступ: <https://emedicine.medscape.com/article/303239-overview>
3. Miller M.R., Hankinson J., Brusasco V. et al. Standardisation of spirometry. «Series ATS/ERS task force: standardisation of lung function testing». Evited by V. Brusasco, R. Grapo and G. Viegi. Number 2 in this Series // Eur. Respir. J. 2005. V. 26. P. 319-338
4. Brian L. Graham, Irene Steenbruggen Martin R. and others. Standardization of Spirometry 2019 Update. An Official ATS and ERS Technical Statement [Electronic resource] / Brian L. – : https://www.thoracic.org/statements/pulmonary-function.php
5. Quanjer, P. Become an Expert in Spirometry. 2012 [Electronic resource] / P. Quanjer. – Access mode: <http://www.spirxpert.com/indices7.htm>

**Information resources**

1. http://www.knmu.kharkov.ua/index.php?option=com\_content&view=frontpage&Itemid=1&lang=uk
2. http://repo.knmu.edu.ua/
3. http://knmu.kharkov.ua/index.php?option=com\_content&view=article&id=498&Itemid=42&lang=uk
4. http://www.moz.gov.ua/ua/portal/
5. http://www.mon.gov.ua/
6. **Prerequisites and co-requisites.**

*Prerequisites.* The study of the discipline involves the prior mastering of disciplines in medical and biological physics, physics, bioorganic and biological chemistry, human anatomy, pathomorphology, physiology and pathophysiology in higher education.

*Postrequisites*. The main provisions of the discipline should be applied in the study of professional disciplines.

**7. Program learning outcomes**

Knowledge and understanding:

PLO 1 – acquisition by a person of general and special fundamental and professionally-oriented knowledge, skills, abilities, competencies necessary for the performance of typical professional tasks related to his / her activity in the medical field in the relevant position

PLO 2 – knowledge of psychophysiological features of the person, human health, support of health, prevention of diseases, treatment of the person, health of the population

Application of knowledge and understanding:

PLO 3 – ability to apply the acquired knowledge, skills and understanding to solve typical problems of the doctor, the scope of which is provided by lists of syndromes and symptoms, diseases, emergencies, laboratory and instrumental research, medical manipulations

PLO 4 – collection of patient information

PLO 5 – evaluation of survey results, physical examination, laboratory and instrumental research data

PLO 6 – establishing a preliminary clinical diagnosis of the disease

PLO 7 – determining the nature, principles of treatment of diseases

PLO 8 – determination of the necessary diet, mode of work and rest in the treatment of diseases

PLO 9 – determining the tactics of contingent of persons subject to dispensary supervision

Formation of judgments: PLO 10 - the ability to assess the state of human health and provide its support taking into account the impact of the environment and other health factors

**Integrative final program learning outcomes,**

the formation of which is facilitated by the discipline:

- Carry out professional activities in social interaction based on humanistic and ethical principles; identify future professional activities as socially significant for human health.

- Apply knowledge of general and professional disciplines in professional activities - Adhere to the norms of sanitary and hygienic regime and safety requirements in carrying out professional activities.

- Use the results of independent search, analysis and synthesis of information from various sources to solve typical problems of professional activity

- Argue information for decision-making, be responsible for them in standard and non-standard professional situations; adhere to the principles of deontology and ethics in professional activities

- Carry out professional communication in modern Ukrainian literary language, use the skills of oral communication in a foreign language, analyzing texts of professional orientation and translate foreign language information sources.

- Adhere to the norms of communication in professional interaction with colleagues, management, work effectively in a team.

- Analyze the information obtained as a result of scientific research, summarize, systematize and use it in professional activities.

**Learning outcomes for the discipline:**

As a result of studying the discipline "Instrumental investigation methods in pulmonology. Assessment of the function of external respiration "the student has

І. Master modern knowledge about:

-physical principles of using instrumental methods of respiratory research in medical practice;

- indicators of static and dynamic lung volumes and capacities. Correct interpretation of the respiratory cycle.

- mechanisms of obstruction and restriction formation, which are types of ventilation insufficiency.

- methodical bases of instrumental methods of research of respiratory organs;

- semiotics of instrumental diagnosis of the most common diseases of the pulmonary system.

- the influence of gender and age on the function of external respiration.

- alternative methods of instrumental research of respiratory organs: ergospirometry, body plethysmography.

ІІ. Be able to apply the acquired knowledge in practical situations:

1. Demonstrate mastery of spirometry.

2. Demonstrate mastery of the method of peak flowmetry.

3. Demonstrate mastery of pulse oximetry.

4. Correctly interpret the spirogram, analyze the "flow-volume" curve.

5. Detect ventilation disorders and demonstrate the technique of bronchodilation test.

6. Demonstrate the correctness of provocative tests in pulmonology.

7. To determine the leading symptoms and syndromes in the clinic of internal diseases, taking into account the data of instrumental examination of the respiratory system.

8. Demonstrate the ability to methodically correctly present the results of the patient's examination in the form of a conclusion.

**The content of the discipline**

To study the discipline "" Instrumental research methods in pulmonology. Assessment of the function of external respiration »» 90 hours are allocated - 3.0 ECTS credits, 30 hours of which are classroom training (in the form of practical classes) and 60 hours - independent work of students

# The content of the discipline

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Topic** | Number of hours | | | | | |
| Form of study (full-time) | | | | | |
| total | У тому числі | | | | |
| lectures | pract | lab | ind | ind |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Topic 1. Lung ventilation. Static and dynamic lung volumes and capacities. Respiratory cycle. |  |  |  |  |  |  |
| Topic 2. History of the spirometer. The device of the spirometer and the general principle of operation. Organization of work with the spirometer and its maintenance. |  |  |  |  |  |  |
| Topic 3. Spirometry. Indications and contraindications to spirometry. Preparing the patient for the study. Examination technique. |  |  |  |  |  |  |
| Topic 4. Spirogram. Flow-volume curve analysis. |  |  |  |  |  |  |
| Topic 5. Mechanisms of obstruction and restriction formation. Types of ventilation insufficiency according to spirometric examination. |  |  |  |  |  |  |
| Topic 6. Recognition of obstructive disorders. Degrees of ventilation disorders. |  |  |  |  |  |  |
| Topic 7. Recognition of restrictive disorders. Degrees of ventilation disorders. |  |  |  |  |  |  |
| Topic 8. Detection of reversibility of obstruction of the lower respiratory tract: bronchodilation test. Conditions and algorithm of the test. |  |  |  |  |  |  |
| Topic 9. Provocative tests. Indications and contraindications. Rules and sequence. Interpretation of the results of the selected parameters. |  |  |  |  |  |  |
| Topic 10. Peak flowmetry. Research methodology and diagnostic value. |  |  |  |  |  |  |
| Topic 11. Ergospirometry. Body plethysmography. |  |  |  |  |  |  |
| Topic 12. Determination of inelastic resistances of the respiratory system. Determination of functional residual capacity using the method of inert gas dilution and integrated platysmography of the body. |  |  |  |  |  |  |
| Topic 13. The influence of gender and age on lung function. Display features on volume and capacity metrics. |  |  |  |  |  |  |
| Topic 14. Study of lung function in occupational diseases. |  |  |  |  |  |  |
| Topic 15. Study of lung function in bronchial asthma. |  |  |  |  |  |  |
| Topic 16. Study of lung function in chronic obstructive pulmonary disease. |  |  |  |  |  |  |
| Topic 17. Criteria for diagnosing lung function in diseases of the lung parenchyma. |  |  |  |  |  |  |
| Topic 18. Criteria for diagnosing lung function in obstructive sleep apnea. |  |  |  |  |  |  |
| Topic 19. Criteria for diagnosing lung function in neuromuscular diseases. |  |  |  |  |  |  |
| Topic 20. The role of functional examination of the lungs to establish indications for surgical treatment. |  |  |  |  |  |  |
| Topic 21. Pulse oximetry. |  |  |  |  |  |  |
| Total hours of discipline | 90 | - | 30 | - | - | 60 |

**Practical classes**

|  |  |  |
| --- | --- | --- |
| № | Topics | Number of hours |
|  | Lung ventilation. Static and dynamic lung volumes and capacities. Respiratory cycle. |  |
|  | History of the spirometer. The device of the spirometer and the general principle of operation. Organization of work with the spirometer and its maintenance. |  |
|  | Spirometry. Indications and contraindications to spirometry. Preparing the patient for the study. Examination technique. |  |
|  | Spirogram. Flow-volume curve analysis. |  |
|  | Mechanisms of obstruction and restriction formation. Types of ventilation insufficiency according to spirometric examination. |  |
|  | Recognition of obstructive disorders. Degrees of ventilation disorders. |  |
|  | Recognition of restrictive disorders. Degrees of ventilation disorders. |  |
|  | Detection of reversibility of lower respiratory tract obstruction: bronchodilation test. Conditions and algorithm of the test. |  |
|  | Provocative tests. Indications and contraindications. Rules and sequence. Interpretation of the results of the selected parameters. |  |
|  | Peak flowmetry. Research methodology and diagnostic value. |  |
| Total hours of practical classes | | 30 |

**Topics of laboratory classes - not provided**

**Individual tasks.**

|  |  |  |
| --- | --- | --- |
| № | Topics | Number of hours |
|  | Ergospirometry. Body plethysmography. |  |
|  | Determination of inelastic resistances of the respiratory system. Determination of functional residual capacity using the method of inert gas dilution and integrated platysmography of the body. |  |
|  | Influence of gender and age indicators on lung function. Display features on volume and capacity metrics. |  |
|  | Study of lung function in occupational diseases. |  |
|  | Study of lung function in bronchial asthma |  |
|  | Study of lung function in chronic obstructive pulmonary disease. |  |
|  | Criteria for diagnosing lung function in diseases of the lung parenchyma. |  |
|  | Criteria for the diagnosis of lung function in obstructive sleep apnea |  |
|  | Criteria for diagnosing lung function in neuromuscular diseases. |  |
|  | The role of functional examination of the lungs to establish indications for surgical treatment. |  |
|  | Pulse oximetry. |  |
| Total hours of practical classes | | 60 |

**Individual tasks.**

At the request of the student during the study of relevant topics, he can perform individual work, which is carried out in extracurricular activities and if successfully completed, is additionally evaluated by the teacher.

**Discipline policy and values.**

In order to successfully complete the relevant course, it is necessary to regularly attend practical classes; to have theoretical preparation for practical classes according to the subject; not to be late and not to miss classes; perform all necessary tasks and work in each lesson; be able to work with a partner or in a group; contact the curators of the course on various issues on the subject of classes and receive it when you need it.

Students can discuss different tasks, but their performance is strictly individual. It is not allowed to write off, use various software, tips, use a mobile phone, tablet or other electronic gadgets during classes for purposes other than the educational process. Students are not allowed to attend practical classes.

Curation of patients is possible provided that students have the appropriate form of clothing, a health book with a mark on vaccination against diphtheria, the results of the examination for the stress of immunity to measles (or a mark on vaccination).

Students with special needs can meet with the teacher or warn him before the start of classes, at the request of the student it can be done by the head of the group. If you have any questions, please contact the teacher. Students' participation in research and conferences on this topic is encouraged.

All students of KhNMU are protected by the Regulations on Prevention, Prevention and Settlement of Cases Related to Sexual Harassment and Discrimination at Kharkiv National Medical University, designed to define an effective mechanism for resolving conflict situations related to discrimination and sexual harassment. This Regulation is developed on the basis of the following normative legal acts of Ukraine: the Constitution of Ukraine; Law of Ukraine "On Education"; Law of Ukraine "On Higher Education"; Law of Ukraine "On Principles of Preventing and Combating Discrimination in Ukraine"; Law of Ukraine "On Ensuring Equal Rights and Opportunities for Women and Men"; Convention for the Protection of Human Rights and Fundamental Freedoms; Convention for the Suppression of Discrimination in Education; Convention on the Elimination of All Forms of Discrimination against Women; General Recommendation № 25 to Article 4, paragraph 1, of the Convention on the Elimination of All Forms of Discrimination against Women; General Comment № 16 (2005) “Equal rights for men and women to enjoy economic, social and cultural rights” (Article 3 of the International Covenant on Economic, Social and Cultural Rights; UN Committee on Economic, Social and Cultural Rights); in the spirit of international mutual understanding, cooperation and peace and education in the spirit of respect for human rights and fundamental freedoms (UNESCO), the Concept of the State Social Program for Equal Rights and Opportunities for Women and Men until 2021. Kharkiv National Medical University provides education and work that is free from discrimination, sexual harassment, intimidation or exploitation. The University recognizes the importance of confidentiality. All persons responsible for the implementation of this policy (staff of deans, faculties, institutes and the Center for Gender Education, members of the student government and ethics committee, vice-rector for research and teaching) are confidential about those who report or accuse of discrimination or sexual harassment (except where the law requires disclosure and / or when disclosure by the University is necessary to protect the safety of others).

KNMU creates a space of equal opportunities free from discrimination of any national, racial or ethnic origin, sex, age, disability, religion, sexual orientation, gender, or marital status. All rights, privileges, programs and activities granted to students or staff of the University apply to all without exception, provided they are properly qualified. The anti-discrimination policy and the policy of counteracting sexual harassment of KNMU are confirmed by the Code of Corporate Ethics and the Charter of KNMU.

**Behavior in the audience**

Basic "yes" and "no"

It is important for students to follow the rules of good behavior at the university. These rules are common to all, they also apply to all faculty and staff, and do not differ in principle from generally accepted norms.

During classes it is allowed:

- leave the audience for a short time if necessary and with the permission of the teacher;

- drink soft drinks;

- take photos of presentation slides;

- take an active part in the class (see Academic Expectations from Students).

forbidden:

- eat (except for persons whose special medical condition requires another - in this case, medical confirmation is required);

- smoking, drinking alcohol and even low-alcohol beverages or drugs;

- to use obscene language or use words that offend the honor and dignity of colleagues and faculty;

- gaff;

- to damage the material and technical base of the university (damage inventory, equipment; furniture, walls, floors, litter the premises and territories);

- shouting, shouting or listening to loud music in classrooms and even in corridors during classes.

**Plagiarism and academic integrity**

The Department of Propaedeutics of Internal Medicine №1, **F**undamentals of Bioethics and biosafety maintains zero tolerance for plagiarism. Students are expected to constantly raise their awareness of academic writing. The first lessons will provide information on what to consider plagiarism and how to properly conduct research and scientific research.

Procedure for informing about changes in the syllabus: necessary changes in the syllabus are approved by the methodical commission of KhNMU on problems of professional training of therapeutic profile and published on the site of KhNMU, the site of the Department of Propaedeutics of Internal Medicine №1, basics of bioethics and biosafety of KhNMU

**Occupational Health**

The first lesson of the course will explain the basic principles of labor protection by conducting appropriate training. It is expected that everyone should know where the nearest evacuation exit is, where the fire extinguisher is, how to use it, and so on.

**The procedure for informing about changes in the syllabus:**

the necessary changes in the syllabus are approved by the methodical commission of KNMU on problems of professional training of therapeutic profile and published on the site of KNMU, the site of the Department of Propaedeutics of Internal Medicine №1, basics of bioethics and biosafety of KNMU.

**Evaluation policy**

**Organization of current control.** Teachers make sure that each student receives the necessary competence in the areas included in the topics of practical classes. Assimilation of the topic (current control) is controlled in a practical lesson in accordance with specific goals. The following tools are used to assess the level of preparation of students: tests, solving situational problems, interpretation and evaluation of laboratory tests, methods of prescribing therapy, monitoring the acquisition of practical skills. Assessment of current learning activities (PND) in each practical lesson is carried out on the traditional 4-point scale: "excellent", "good", "satisfactory" and "unsatisfactory".

**Grade from the discipline.** The final lesson (SO) is conducted in accordance with the curriculum during the semester on schedule, during classes. The grade for the discipline is given to the student at the last (final) lesson. The final score for PND and final lesson (PZ) is defined as the arithmetic mean of traditional grades for each lesson and PZ, rounded to 2 decimal places (to the nearest hundredth), which are converted into points in accordance with the "Instructions for assessing student learning. … »Using Table 2 or the average grade (to the nearest hundredth) for HDPE and its conversion into ECTC scores, the teacher automatically receives using the electronic journal ACS. The minimum number of points that a student must score for the current activity during the study of the discipline is 120 points, the maximum number of points - 200 points.

**Assessment of students' independent work.** Independent work of students, which is provided by the topic of the lesson along with the classroom work, is assessed during the current control of the topic in the relevant lesson.

**Assessment of individual tasks of the student is carried out by performing the tasks of the teacher:**

• report of the abstract on a practical lesson 0 - 2 points;

• report with a presentation in a practical lesson 0 - 3 points,

• report at scientific and practical conferences of the department, university, writing abstracts, articles 0 - 5 points;

• participation in the All-Ukrainian Olympiad - 5 - 10 points Scores for individual student tasks (a total of not more than 10 points) can be added as an incentive additional points to the final score for current learning activities, calculated using Table 2 and are part of the assessment of the discipline.

During the assessment of mastering each subject of the discipline (current educational activity - PND) and the final lesson (PZ) the student is graded according to the traditional 4-point system: "excellent", "good", "satisfactory" and "unsatisfactory". The maximum number of points that a student can score when studying the discipline is - 200, the minimum - 120 points.

After graduating from the discipline "Instrumental research methods in pulmonology. Assessment of the function of external respiration "the student receives a test.

**Recalculation of the average score for current activities in a multi-point scale**

1. Evaluation of current educational activities (PND). Recalculation of the average grade for current activities in a multi-point scale is carried out in accordance with the "Instructions for assessing the educational activities of students…" (table 2).

2. Assessment of the discipline. The final score for PND and final lesson (PZ) is defined as the arithmetic mean of traditional grades for each lesson and PZ, rounded to 2 decimal places, which are listed in points using Table 2. Assessment of individual tasks of the student is carried out for performance of tasks of the teacher: the report of the abstract on practical employment 0 - 2 points; report with presentation at practical lesson 0 - 3 points, report at scientific and practical conferences of the department, university, writing abstracts, articles 0 - 5 points; participation in the All-Ukrainian Olympiad - for each type of activity 5 - 10 points (not more than 10 points in total), which can be added as incentive additional points to the final score for current educational activities, calculated using

Table 2 and included in the discipline.

Table 2

**Recalculation of the average score for current activities in a multi-point scale**

(for disciplines ending in differential credit

| 4-point scale | 200-point scale |  | 4-point scale | 200-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 3** | **not enough** |

Elimination of academic debt (working off). Carried out in accordance with the "Regulations on the procedure for students of the Kharkiv National Medical University to study the order of KhNMU" from \_06.11.2019 №453

<http://www.knmu.kharkov.ua/index.php?searchword=%D0%B2%D1%96%D0%B4%D0%BF%D1%80%D0%B0%D1%86%D1%8E%D0%B2%D0%B0%D0%BD%D0%BD%D1%8F&ordering=&searchphrase=all&Itemid=1&option=com_search&lang=uk>

**Tasks for independent work**

The basic list of types of independent work of students, developed in accordance with the structure of the discipline, is presented in "Independent work". Mandatory type of independent work of students is the supervision of patients and writing a detailed history of the disease, which is provided in the study of "Symptoms and syndromes in respiratory diseases". The tasks for independent work are:

1. Observation of a patient (questioning, physical examination, evaluation of the results of instrumental and laboratory examinations) with pathology of the pulmonology system with writing a fragment of medical history and presentation of a clinical case in practice

The student independently chooses the disease for which he will conduct curation (questioning, examination) of the patient.

The rules for appealing the assessment are carried out in accordance with applicable regulations.