# 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

FUNDAMENTALS OF ULTRASOUND DIAGNOSTICS IN CLINICAL MEDICINE

|  |  |
| --- | --- |
| The syllabus of the discipline was approved at the meeting of the department of Propedeutics to Internal Medicine #1, Fundamentals of Bioethics and BiosafetyProtocol from“ ” August 2018 № \_\_ Head of the Department Ashcheulova T. V(signature) (surname and initials)“ ” August 2018 | Approved by the methodical commission on problems of Professional Educational in therapeutic profile of KhNMUProtocol from“ ” August 2018 № \_1\_ Head professor Kravchun P.G. (signature) (surname and initials)“ ” August 2018 |

Kharkiv 2018

**Information about teachers:**

|  |  |
| --- | --- |
| Name | Ashcheulova Tetiana VadymivnaAmbrosova Tetiana MykolaivnaPytetska Nataliia IvanivnaKompaniiets Kira MykolaivnaLatoguz Yurii IvanovichSmyrnova Victoriia IvanivnaShapovalova Svetlana OleksandrivnaGerasimchuk Nina MykolaivnaKochubei Oksana AnatoliivnaHonchar Oleksii VolodimirovichSytina Irina VasylivnaMolodan Dmytro VolodimirovichKysylenko Kateryna Volodymyrivna |
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| E-mail: | pim1bioethics@gmail.com |
| Timetable | According to the schedule of the educational department |
| Consultations: | According to the schedule posted on the information stand of the department of Propaedeutics of Internal Medicine №1, Fundamentals of Bioethics and biosafety **Online consultations**: schedule and venue by prior arrangement with the teacher.  |

**Location:** 61035, Kharkiv, 137 Gagarina Ave.; Rooms for practical classes are located on the 1-t floor. Lecture room – according to the schedule of the educational department

Rooms for practical classes are located on the 4-th floor, rooms 27, 35, 36.

**Discipline information**

1. **Description of the discipline**

**Syllabus**of discipline " Fundamentals ultrasound of the heart " is composed for educational and professional program "Medicine" second (master's) level , industry knowledge 22 "Health", specialty 22 2 " Medicine ".

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

Fundamentals ultrasound of the heart and blood vessels are selective disciplines th clinical phase of undergraduate training of doctors, the study of which allows students to learn general principles of the use of diagnostic medical ultrasound and based on its use for the diagnosis of diseases of the cardiovascular system . Thus, the Fundamentals of ultrasound examination of the heart and blood vessels - 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 .

Organization of 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 workload applicant higher education and necessary to achieve defined results nav Channa , and is recorded in credits ECTS. The amount of one loan is 30 hours. The workload of one academic year is usually 60 ECTS credits. Credit ECTS includes all types of student work: auditorium, independent, undergone practical training, certification training and preparation, and so on .

**Subject**to yvchennya discipline " Fundamentals ultrasound of the heart " is a set of theoretical and practical issues aimed at mastering the theoretical principles and methodology ultrasound of the heart and blood vessels, and ultrasound semiotics of the most common diseases of the cardiovascular system .

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

1.1. The purpose of teaching the discipline " Fundamentals of ultrasound examination of the heart " is to provide students with basic theoretical knowledge and professional competencies of ultrasound examination of the cardiovascular system .

1.2. The main tasks of studying the discipline " Fundamentals of ultrasound examination of the heart " are:

- Mastering by the student of the theoretical knowledge necessary for performance of ultrasonic research

- Mastering the practical techniques and methods of ultrasound examination of the heart and blood vessels

- Assimilation of ultrasound semiotics of the most common diseases of the cardiovascular system .

1. **Discipline status (normative ) and discipline format ( *mixed*)**

1. **Teaching methods**

According to the sources of knowledge, the following teaching methods are used: verbal - story, explanation, lecture, instruction; visual - demonstration, illustration; practical - practical work, tasks.

By the nature of the logic of cognition, the following methods are used:

analytical, synthetic, analytical-synthetic, inductive, deductive.

According to the level of independent mental activity, the following methods are used:

problematic, partially exploratory, research.

According to the curriculum, there are practical classes, independent work of students (VTS).

Practical classes lasting 4 academic hours are held in a therapeutic clinic and consist of two structural parts:

1) mastering the theoretical part of the topic,

2) solving situational tasks and test-control of mastering the material.

Departments teaching the discipline have the right to make changes to the curriculum within 15% depending on the direction of scientific and practical work of the department, organizational and diagnostic capabilities of its clinical bases, but must meet the overall requirements of the discipline in accordance with the ultimate goals of OKH and OPP in the direction of training and curriculum.

1. **Recommended Books**

**Basic**

1. Abdullaev, R.Ya. Ultrasonography: a textbook / R.Ya. Абдуллаев, Т.С. Golovko.-H .: Nove slovo, 2009. - 180 p .: ill.
2. Flaxkampf F.A. Echocardiography course / Edited by VA Sandrikov. M .: MEDpress-inform, 2016. - 326p.
3. Rybakova MK, Alekhin MN, Mitkov VV A practical guide to ultrasound diagnostics. Echocardiography. Ed. 2nd, ed . and ext. M .: Vidar-M Publishing House, 2008. - 544 pp., Ill.
4. Mitkov VV A practical guide to ultrasound diagnostics. General ultrasound diagnostics. M: Vidar, 2011, 720 p.
5. Lelyuk VG, Lelyuk SE Ultrasound angiology. - 3rd ed. - М .: Реал - Тайм, 2007. - 416 с.
6. Wilkenshof W. Handbook of echocardiography . Ed. 2nd / Wilkenshof W., Kr uk I. - M .: Med. literature, 2014 . - 304 p.

**Auxiliary**

1. Rudski LG, Lai WW, Afilalo J, Hua L, Handschumacher MD, Chandrasekaran K, et al. Guidelines for the echocardiographic assessment of the right heart in adults: a report from the American Society of Echocardiography endorsed by the European Association of Echocardiography, a registered branch of the European Society of Cardiology, and the Canadian Society of Echocardiography. J Am Soc Echocardiogr. 2010; 23 (7): 685-713; quiz 86-8.

2. Lang RM, Badano LP, Mor-Avi B, Afilalo J, Armstrong A, Hernande L, et al. Recommendations for cardiac chamber quantification by echocardiography in adults: an update from the American Society of Echocardiography and the European Association of Cardiovascular Imaging. Eur Heart J Cardiovasc Imaging. 2015; 16 (3): 233-70.

3. Galie N, Humbert M, Vachiery JL, Gibbs S, Lang I, Torbicki A, et al. 2015 ESC / ERS Guidelines for the diagnosis and treatment of pulmonary hypertension: The Joint Task Force for the Diagnosis and Treatment of Pulmonary Hypertension of the European Society of Cardiology (ESC) and the European Respiratory Society (ERS): Endorsed by: Association for European Pediatric and Congenital Cardiology (AEPC), International Society for Heart and Lung Transplantation (ISHLT). Eur Heart J. 2016; 37 (1): 67-119.

4. Nagueh SF, Smiseth OA, Appleton CP, Byrd BF, 3rd, Dokainish H, Edwardsen T, et al. Recommendations for the Evaluation of Left Ventricular Diastolic Function by Echocardiography: An Update from the American Society of Echocardiography and the European Association of Cardiovascular Imaging. J Am Soc Echocardiogr. 2016; 29 (4): 277-314.

5. Ponikowski P, Voors AA, Anker SD, Bueno H, Cleland JGF, Coats AJS, et al. 2016 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure: The Task Force for the diagnosis and treatment of acute and chronic heart failure of the European Society of Cardiology (ESC) Developed with the special contribution of the Heart Failure Association (HFA ) of the ESC. Eur Heart J. 2016; 37 (27): 2129-200.

6. Baumgartner H, Falk V, Bax JJ, De Bonis M, Hamm C, Holm PJ, et al. 2017 ESC / EACTS Guidelines for the management of valvular heart disease. Eur Heart J. 2017; 38 (36): 2739-91.

7. Baumgartner HC, Hung JC-C, Bermejo J, Chambers JB, Edwardsen T, Goldstein S, et al. Recommendations on the echocardiographic assessment of aortic valve stenosis: a focused update from the European Association of Cardiovascular Imaging and the American Society of Echocardiography. Eur Heart J Cardiovasc Imaging. 2017; 18 (3): 254-75.

8. Lancellotti P, Pellikka PA, Budts W, Chaudhry FA, ​​Donal E, Dulgheru R, et al. The Clinical Use of Stress Echocardiography in Non-Ischaemic Heart Disease: Recommendations from the European Association of Cardiovascular Imaging and the American Society of Echocardiography. J Am Soc Echocardiogr. 2017; 30 (2): 101-38.

9. GorterTM, van Veldhuisen DJ, Bauersachs J, Borlaug BA, Celutkiene J, Coats AJS, et al. Right heart dysfunction and failure in heart failure with preserved ejection fraction: mechanisms and management. Position statement on behalf of the Heart Failure Association of the European Society of Cardiology. Eur J Heart Fail. 2018; 20 (1): 16-37.

10. Williams B, Mancia G, Spiering W, Agabiti Rosei E, Azizi M, Burnier M, et al. 2018 ESC / ESH Guidelines for the management of arterial hypertension: The Task Force for the management of arterial hypertension of the European Society of Cardiology and the European Society of Hypertension: The Task Force for the management of arterial hypertension of the European Society of Cardiology and the European Society of Hypertension. J Hypertens. 2018; 36 (10): 1953-2041.

**Information resources**

1. http: // ultrasound.net .ua /

2. http: // escardio.org /

**6**. **Prerequisites and co-requisites of the discipline**

**Interdisciplinary links**: according to the curriculum, the study of the discipline " Fundamentals of Ultrasound of the Heart " is carried out in the XI-XII semesters, after mastering knowledge of certain sections of biological physics, human anatomy and pathomorphology, with which the discipline program is closely integrated . In turn, educati and disciplines and " Fundamentals ultrasound of the heart " contributes to a better understanding of the student the basics of ultrasound diagnosis of heart disease in the study of these clinical disciplines - internal medicine, family medicine, oncology, anesthesiology and intensive care, providing forming Integration Issues th of these disciplines and the ability to apply ultrasound methods of examination of the patient in the process of further training and in professional activities

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

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

1. **Learning outcomes**

Dee subject matter provides entry students

***competencies*:**

- *integral****:***

ability to solve typical and complex specialized tasks 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 :*

* 1. Ability to abstract thinking, analysis and synthesis.
	2. Ability to learn and master modern knowledge.
	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, the method of self-presentation), teamwork (implemented through : project method, openwork saw ), conflict -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. | On the usefulness solve common and complex specialized tasks and practical problems in careers in health care or in learning, which provides research and / or innovation and implementation is characterized by complexity and uncertainty of conditions and requirements. |  |
| **General competencies** |  |
| 1.
 | Ability to abstract thinking, analysis and synthesis, the ability to learn and be modernly trained | Know the methods of analysis, synthesis and further modern learning | Be able to analyze professional information, make informed decisions, acquire modern knowledge | Establish appropriate commun - ing for achievements - ing purposes. | Bear responsibility - tions for the timely acquisition of modern knowledge . |
| 1.
 | Ability to apply knowledge in practical situations | Have specialized conceptual knowledge, being in the learning process. | In myths solvability - wool complicated backside chi and problems that arise in professional activities. | Clearly not - ambiguous untilit - Senna own conclusions, knowledge and explanations that they are grounded - tion to specialists and non-specialists. | Responsible for making decisions in difficult conditions |
| 1.
 | Knowledge and understanding of the subject area and understanding of professional activity | Have in-depth knowledge of the structure - tours profession. | To be able to carry out professional Diyala - ness that needs updating and integration of knowledge. | Ability effective - wise to form a communication strategy in professional activities | Bear responsibility - tions for occupations - tion development, pass - ness away to - Shogo professional Nav - Channa high-autonomous - ness. |
| 1.
 | Ability to adapt and act in a new situation. | Know the types and methods of adaptation, principles of action in a new situation | To be able to use tools samorehu - lyatsiyi to be able to at - hundred - sovuvatysya to new situations (circumstances) life and work. | Establish appropriate commun - ing to reach - Nan - ing result. | Bear responsibility - ness timely use of methods of self-regulation. |
| 1.
 | Ability to make an informed decision | Have the principles of comprehensive critical analysis of input data | To be able to make informed RI - tion, which best meets the patient disposable ultrasound symptom | Use strategy Union - ing skills and interpersonal interaction | Bear responsibility - tions for the choice of tactics and research and an opinion on the results |
| 1.
 | Skills in the use of information and communication technologies | Have deep knowledge in the field of information and communication technologies used in professional activities | Able are used - vuvaty informa - tion and commune - tion technology professional ga - a meadow in need of renovation and integration of knowledge. | Use information and communication technologies in professional activities | Bear responsibility - tions for the development of professional knowledge and skills. |
| **Special (professional) competencies** |  |
| 1. 3
 | Ability to establish a syndromic diagnosis of the disease | Have specialized knowledge about the anatomical and morphological features of the cardiovascular system ; al algorithms for the selection of leading symptoms and syndromes; methods of ultrasound examination; knowledge of human condition assessment. | In order to conduct an ultrasound examination of the cardiovascular system ; be able to make informed decisions about the form l spare wire Kleene co-instrumental syndrome | On the basis of normative documents to keep medical documentation of the patient (card of the inpatient , etc.). | Following ethical and Jurassic dychnyh rules adopted take responsibility for cha grounded tovanyh decisions and actions to correct the established son dromnoho diagnosis of disease |
| 1. 5
 | Ability to diagnose emergencies | Mother, special Wani knowledge of people ynu, his organs and systems, standard methods of examination Liu dyny | Able , in the absence of information, using standard techniques, by making an informed decision to assess the human condition and the need for emergency care | Under any circumstances, in accordance with the relevant ethical and legal norms, make an informed decision regarding the assessment of the human condition and the organization of non-essential medical measures depending on the human condition. | Be responsible for timely - ness and effective - ness for health - moves on diagnosing urgent conditions |
| 3. | Ability to plan and conduct sanitary, preventive and anti-epidemic measures, including infectious diseases | Know the system of sanitary and hygienic and preventive measures in a medical hospital .Know the principles of asepsis and antiseptics | Have the skills to organize the sanitary and hygienic regime of the ultrasound diagnostics room. | From Nata principles for presenting informa - tion on Sanitary th state note- schen and observance ing g o-hospital and medical Ojo Ronnie mode jacks management structural units Zak treatment system; use lectures and interviews. | Bear responsibility - tions for timely and high-quality event and from pro bakes ting self -sanitary and sanitary and health-protective mode main divisions diliv hospitalpromoting a healthy lifestyle . |
| 4 . | Ability to keep medical records | Know formal documents in a professional first work of medical personnel , including modern computer information technology | To be able to determine the source and location of the desired information in dependence of its type ; in myths processed information and conduct an analysis of the received information | Get the necessary information from certain sources and analysis based on its shape - cotton appropriate conclusions | Be responsible for the completeness and quality of the analysis of information and conclusions based on its analysis. |

**Program learning outcomes**

- 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

- knowledge of psychophysiological features of the person, human health, health support, disease prevention, treatment of the person, health of the population

- 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

- collection of patient information

- evaluation of survey results, physical examination, laboratory and instrumental research data

- establishing a preliminary clinical diagnosis of the disease

- diagnosing emergencies, determining the tactics of emergency medical care

- carrying out sanitary and hygienic and preventive measures

- maintaining medical records, processing of state, social and medical information

- 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

**Learning outcomes:**

As a result of studying the discipline " Fundamentals of ultrasound examination of the heart " the student has

I. Ov to master modern knowledge about :

- physical principles of using diagnostic ultrasound in medical practice ;

- ultrasound anatomy of the cardiovascular system ;

- methodical bases of ultrasonic research of heart and vessels;

- ultrasound semiotics of the most common diseases of the cardiovascular system .

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

1. Demonstrate mastery of the method of ultrasound examination of the heart .
2. Demonstrate mastery of the method of ultrasound examination of the main vessels of the neck .
3. Demonstrate mastery of the technique of ultrasound examination of peripheral vessels .
4. To determine the leading symptoms and syndromes in the clinic of internal diseases , taking into account the data of ultrasound examination .
5. 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**

              In the study of discipline " Fundamentals ultrasound of the heart " given 9 0 hours - 3 , 0 ECTS credits, 30 hours of which is Classroom training (in the form of practical training - 30 hours a ) and 6 0 hours - independent work of students .

**Description of the discipline**

|  |  |  |
| --- | --- | --- |
| Name of indicators | Field of knowledge, direction of training, educational and qualification level | Characteristics of the discipline |
| **full-time education** |
| Number of credits - 4 | Training direction22 "Health care" | Normative |
| The total number of hours is 120 | Specialty:222 "Medicine" | **Year of preparation:** |
| 6th |
| **Semester** |
| 11th / 12th |
| **Lectures** |
| Hours for full-time study:classrooms - 20independent work of the student - 100 | Education level:master  | 0 hours |
| **Practical, seminar** |
| 20 hours |
| **Laboratory** |
| 0  |
| **Individual work** |
| 10 0 hours |
| **Individual tasks:**0 hours. |
| Type of control:With alik |

**The structure of the discipline**

|  |  |
| --- | --- |
| Names of sections of the discipline and topics | Number of hours |
| Form of study (full-time) |
| total | Including |
| cure | ave | lab | ind | cf. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Topic 1. Physical foundations of ultrasound . Fundamentals of image formation in the main modes of operation of the ultrasound scanner |  |  |  |  |  |  |
| Topic 2. Ultrasound anatomy of the heart and main vessels, vessels of the neck, peripheral vessels . |  |  |  |  |  |  |
| Topic 3. Methods of ultrasound examination of the heart . Methods of ultrasound examination of the main arteries of the neck |  |  |  |  |  |  |
| Topic 4. Methods of ultrasound examination of peripheral arteries and veins. |  |  |  |  |  |  |
| Topic 5. Quantification of heart chambers . Assessment of systolic heart function |  |  |  |  |  |  |
| Topic 6. Assessment of diastolic heart function. Evaluation of pulmonary artery pressure |  |  |  |  |  |  |
| Topic 7 . Modern approaches to the assessment of regurgitation on the heart valves |  |  |  |  |  |  |
| Topic 8 . Modern approaches to the assessment of heart valve stenosis .  |  |  |  |  |  |  |
| Topic 9. Ultrasound semiotics of hypertensive heart. Ultrasound semiotics of pulmonary hypertension. |  |  |  |  |  |  |
| Topic 10. Ultrasound semiotics of coronary heart disease. Ultrasound semiotics of cardiomyopathies. |  |  |  |  |  |  |
| Topic 11. Ultrasound semiotics of diseases of the pericardium, aorta. Ultrasound semiotics of diseases of the vessels of the neck . |  |  |  |  |  |  |
| Topic 12. Ultrasound semiotics of diseases of peripheral arteries and veins . Test. |  |  |  |  |  |  |
| Topic 13. Credit. |  |  |  |  |  |  |
| Total hours of discipline | 120 |  | 20 |  |  | 100 |

**Topics of lectures - not provided.**

**Topics of seminars - not provided.**

**Topics of practical classes**

|  |  |  |
| --- | --- | --- |
| №s / n | Name topics | Numberhours |
| 1.
 | Physical basics of ultrasound . Fundamentals of image formation in the main modes of operation of the ultrasound scanner |  |
| 1.
 | Ultrasound anatomy of the heart and main vessels, vessels of the neck, peripheral vessels . |  |
| 1.
 | Methods of ultrasound examination of the heart . Methods of ultrasound examination of the main arteries of the neck |  |
| 1.
 | Methods of ultrasound examination of peripheral arteries and veins. |  |
| 1.
 | Quantification of heart chambers . Assessment of systolic heart function |  |
| 1.
 | Assessment of diastolic heart function. Evaluation of pulmonary artery pressure |  |
| 1.
 | Modern approaches to the assessment of regurgitation on heart valves |  |
| 1.
 | Modern approaches to the assessment of heart valve stenosis .  |  |
| 1.
 | Ultrasound semiotics of hypertensive heart. Ultrasound semiotics of pulmonary hypertension. |  |
| 1.
 | Ultrasound semiotics of coronary heart disease. Ultrasound semiotics of cardiomyopathies. |  |
| 1.
 | Ultrasound semiotics of diseases of the pericardium, aorta. Ultrasound semiotics of diseases of the vessels of the neck . |  |
| 1.
 | Ultrasound semiotics of diseases of peripheral arteries and veins . |  |
| 1.
 | Test. |  |
| Total hours of practical training | 20 |

**Topics of laboratory classes - not provided.**

**Individual work**

|  |  |  |
| --- | --- | --- |
| №s / n | Name topics | Numberhours |
| 1.
 | Physical basics of ultrasound . Fundamentals of image formation in the main modes of operation of the ultrasound scanner |  |
| 1.
 | Ultrasound anatomy of the heart and main vessels, vessels of the neck, peripheral vessels . |  |
| 1.
 | Methods of ultrasound examination of the heart . Methods of ultrasound examination of the main arteries of the neck |  |
| 1.
 | Methods of ultrasound examination of peripheral arteries and veins. |  |
| 1.
 | Quantification of heart chambers . Assessment of systolic heart function |  |
| 1.
 | Assessment of diastolic heart function. Evaluation of pulmonary artery pressure |  |
| 1.
 | Modern approaches to the assessment of regurgitation on heart valves |  |
| 1.
 | Modern approaches to the assessment of heart valve stenosis .  |  |
| 1.
 | Ultrasound semiotics of hypertensive heart. Ultrasound semiotics of pulmonary hypertension. |  |
| 1.
 | Ultrasound semiotics of coronary heart disease. Ultrasound semiotics of cardiomyopathies. |  |
| 1.
 | Ultrasound semiotics of diseases of the pericardium, aorta. Ultrasound semiotics of diseases of the vessels of the neck . |  |
| 1.
 | Ultrasound semiotics of diseases of peripheral arteries and veins . |  |
| 1.
 | Test. |  |
| Total hours of practical training | 100 |

**Individual tasks.**

Individual tasks include: review of scientific literature, preparation of abstracts, conducting research and individual teaching and research tasks, writing abstracts of research and presentations at conferences.

**Discipline policy and values**

It is expected that students will attend all lectures and practical classes. If they missed classes, it is necessary to work it out (according to the schedule on the information stand of the department)

Written and homework assignments must be completed in a timely manner, and if students have questions, they can contact the teacher in person or by e-mail, which the teacher will provide at the first practical lesson.

During the **lecture**, students are recommended to keep a synopsis of the lesson and keep a sufficient level of silence. Asking questions to the lecturer is perfectly normal.

**Practical training**

Active participation during the discussion in the audience, students should be ready to understand the material in detail, ask questions, express their point of view, discuss. During the discussion it is important:

- respect for colleagues,

- tolerance for others and their experience,

- receptivity and impartiality,

- the ability to disagree with the opinion, but to respect the identity of the opponent (s),

- careful argumentation of his opinion and the courage to change his position under the influence of evidence,

- self-expression, when a person avoids unnecessary generalizations, describes his feelings and formulates his wishes based on their own thoughts and emotions,

- obligatory acquaintance with primary sources.

A creative approach in its various manifestations is welcome. Students are expected to be interested in participating in city, national and international conferences, competitions and other events in the subject profile.

**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 to the audience, where the fire extinguisher is, how to use it, and so on.

**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 are not fundamentally different from the 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 lesson (see Academic expectations of 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;

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

- gambling;

- 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, Fundamentals of Bioethics and Biosafety maintains zero tolerance for plagiarism. Male and female 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.

The procedure for informing about changes in the syllabus: the necessary changes in the syllabus are approved by the methodical commission of KhNMU on the 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

**Evaluation policy**

The European Credit Transfer and Accumulation System ( ECTS ) is a credit transfer and accumulation system used in the European Higher Education Area to provide, recognize, validate qualifications and educational components and to promote the academic mobility of higher education applicants. The system is based on determining the study 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 60 ECTS credits . ECTS credit includes all types of student work: classroom, independent, practical training, preparation and preparation of certification, etc.

Assessment is one of the final stages of a student's learning activities and determining academic performance. Assessment is an opportunity to assert that the student has acquired the necessary knowledge, understanding, skills, competencies. Competence means the student's proven ability to use knowledge, skills and personal skills in learning or work situations. Competence is the ability to transfer knowledge into practice.

Different types of assessment scales are used in higher medical education: multi-point scale, national 4-point scale and ECTS scale. The results are converted from one scale to another according to the following rules. At Kharkiv National Medical University, the recommended multi-point scale is the 200-point scale. All examples in the Instructions are for a 200-point scale.

* ***The current educational activity****(hereinafter -****PND****)*is carried out by the teacher of the academic group, after mastering by students of each topic of the discipline and grades are set using a 4-point (traditional) system. At the end of the semester, the teacher automatically receives the average grade (to the nearest hundredth) for the current activity with the help of an electronic journal of the ACS system. In the future, if in the current semester the study of the discipline ends with a credit, the average score of the current success of the teacher of the department is translated into a 200-point scale ECTS.
* **The final semester control**is carried out after the completion of the study of the discipline in the form of a test, which is conducted by the teacher of the academic group at the last lesson of the discipline. Admission to the test is determined in the points of current educational activities, namely:  min - 12 0, max - 20 0 points. The grade in the discipline is equal to the grade of **PND**in points from min - 120 to max - 200 and corresponds to the traditional grade on a two-point scale : "credited", "not credited" .

**Evaluating the success of students in the ECT S organization of the educational process**

***Assessment of current learning activities (IPA)***

When assessing the mastery of each subject of the discipline ( **PND**), the student is graded according to the traditional 4-point system: "excellent", "good", "satisfactory" and "unsatisfactory".

              The final score for the current learning activity ( **PND**) is defined as the arithmetic mean of traditional grades for each lesson, rounded to 2 decimal places, and is converted into a multi-point scale according to the tables.

The recalculation of the average grade for **IPA**for disciplines that end with a test is carried out according to the table. The minimum number of points that a student must score to get credit - 120 points, the maximum possible score - 200 points.

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

**(for disciplines ending with a credit )**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 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 | **Less than 3** | **Not enough** |
| 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 |  |  |

***Assessment of individual student tasks***

***Individual tasks of the student****(further -****ISS****)*are estimated in points of ECTS (no more than **10**) which are added to the sum of points gained for current educational activity. Points for individual tasks are accrued to the student only once as a commission (commission - head of the department, head teacher, group teacher) only if they are successfully completed and defended. In no case may the total amount of points for IPA exceed 2 0 0 points.

***Assessment of students' independent work***

Learning topics submitted to independent work is checked during workshops and offset .

***With alik***

The test is given to students who have met all the requirements of the curriculum and do not have missed classes .

***Grade from the discipline***

The grade in the discipline is equal to the grade of current activity and is expressed on the traditional two-point scale: "credited" or "not credited". The maximum number of points that a student can get the study subjects **-**200 points of inimalna number of points that must collect for current educational activity is 120.

**Methodical support**

Curriculum;

Plans for practical classes and independent work of students;

Methodical developments for the teacher;

Methodical instructions for practical classes for students;

Methodical materials that provide independent work of students;

Test and control tasks for practical classes;

Questions and tasks to control the assimilation of the section;

List of questions before the test, tasks to test practical skills during the test.

# Head of the Department, Doctor of Medicine, Professor TV Ashcheulova