**Kharkiv National Medical University**

**I medical faculty**

**Department of Surgery №1**

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

**level of higher education in the field of knowledge**

**22 "Health" in specialty 222 "Medicine"**

**"SYLLABUS OF THE COURSE**

**CARDIOVASCULAR SURGERY**

The syllabus of the discipline

was approved at the meeting

Department of Surgery №1

Protocol from

«28» August 2020

Head of Department

\_\_\_\_\_\_\_\_\_\_\_ prof. V.V. Boyko

(signature) (surname and initials)

«28» August 2020

Approved by the methodical

commission of KhNMU on problems

of professional training surgical profile

Protocol № 1 from «28»August 2020

Chairman of the methodical

commission of KhNMU on problems

of professional training surgical profile

\_\_\_\_\_\_\_\_\_\_\_\_ Prof. V.O. Siplivy

(signature) (surname and initials)

"28"August 2020

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**Eye consultations:** schedule and venue according to the schedule of the department.

**Online consultations:** schedule and venue by prior arrangement with the teacher.

Locations: classes are held in the conditions of the State Institution "V.T. Zaitsev Institute of General and Emergency Surgery of the National Academy of Medical Sciences of Ukraine"

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

According to modern ideas, surgery studies diseases that are not amenable to therapeutic treatment, methods of disease diagnosis, tactics of treatment of patients and prevention. Surgery is closely related to the basic sciences such as anatomy, physiology, human histology, etc. Given all these basic sciences of medicine, the doctor is often on the verge of life and death of the patient.

During the study it is important to form academic training in basic and clinical biomedical sciences and prepare graduates for the professional activity of a doctor in office by acquiring general and special competencies, the scope of which is described by certain lists of syndromes and symptoms of diseases, emergencies, physiological conditions and diseases requiring special tactics of patient management; laboratory and instrumental research, medical manipulations, surgical interventions, labor, forensic and military expertise.

This course focuses on solving the main problems of cardiovascular surgery. The program covers topics related to the most common diseases of people in need of surgery. Clinical experience can be gained during the practical classes of the course in the leading institutions of the region according to the schedule. During the course, students have the opportunity to participate in the curation and demonstration of patients with various pathologies, as well as the development of practical skills during classes in phantom classes of the National Academy of Sciences of KhNMU. That is, the course covers the main both practical and theoretical aspects of the future practitioner

**2. Discipline information**

Name of indicators Field of knowledge, direction of training, educational and qualification level

# **3. Description of the discipline**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name of indicators** | **Field of knowledge, direction of training, educational and qualification level** | **Characteristics of the discipline** | |
| Day form of study | evening form of study |
| **Number of credits –**  **3** | **Educational program for training specialists of the second (master's)**  **level of higher education in the field of knowledge**  **22 "Health" in specialty 222 "Medicine"** | **Normative**  **(optional)** | |
| **The total number of hours – 90** | **Specialty:**  **222 "Medicine"**  (code and name) | **Year of preparation:** | |
| **6** | |
| **Semesters** | |
| **11-12** | |
| **Lections** | |
| **Hours for full-time study:**  **classroom - 60**  **practical classes,**  **independent work of the student - 30 hours.** | **Education level:**  **Master specialist** | **0** | |
| **Practical, seminars** | |
| **60** | |
| **Laboratory** | |
| **0** | |
| **Independent work** | |
| **30** | |
| **Individual tasks:**  **to 10** h. | |
| **Type of control:**  **Differentiated credit** | |

Educational program of higher education of Ukraine, second (master's) level, educational qualification awarded - master's degree, field of knowledge - 22 Healthcare, specialty 222 "Surgery" is based on the Law of Ukraine "On Higher Education" and the resolution of the Cabinet of Ministers of Ukraine 01.02.2017 № 53 "On amendments to the resolution of the Cabinet of Ministers of Ukraine dated 29.04.2015 № 266", in accordance with the order of the Ministry of Education and Science of Ukraine dated 01.06.2016 № 600 "On approval and implementation of Methodological recommendations for the development standards 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, sex, 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.

Link to the video annotation of the discipline (if available), etc .: http://www.knmu.kharkov.ua/index.php?option=com\_content&view=article&id=95%3A-1&catid=7%3A2011-05- 05-09-09-08 & Itemid = 27 & lang = uk

**Moodle discipline page (if available):**

http://31.128.79.157:8083/course/view.php?id=804

http://31.128.79.157:8083/course/view.php?id=803

http://31.128.79.157:8083/course/view.php?id=233

**2. Purpose:** to provide training of highly qualified specialists in the field of surgery, namely in cardiovascular surgery, able to solve complex problems.

**The main objectives of the course are** for students to acquire competencies in accordance with the general and professional competencies of the educational-professional program "Medicine" of the second level of higher education in 222 Medicine: ability to abstract thinking, analysis and synthesis, ability to learn and be modern; ability to apply knowledge in practical situations; knowledge and understanding of the subject area and understanding of professional activity; ability to adapt and act in a new situation; ability to make an informed decision; work in a team; interpersonal skills; ability to communicate in the state language both orally and in writing; ability to communicate in a foreign language; skills of using information and communication technologies; determination and persistence in terms of tasks and responsibilities; ability to act socially responsibly and consciously. Survey skills; ability to determine the necessary list of laboratory and instrumental research methods and evaluate their results; ability to establish a preliminary and clinical diagnosis of the disease; ability to determine the principles and nature of treatment of diseases, the ability to determine the tactics of surgical intervention; the necessary mode of work and rest, the nature of nutrition in the treatment of diseases, the ability to diagnose emergencies; ability to determine tactics and skills of emergency medical care; skills of performing medical manipulations; ability to plan and conduct sanitary and hygienic, preventive and anti-epidemic measures, including on infectious diseases; ability to determine the tactics of management of persons subject to dispensary supervision; ability to keep medical records.

**3. Discipline status: basic;** The format of the discipline is mixed - the discipline, which is accompanied by Moodle, 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 (supervision of patients of surgical profile), phantom, electronic-informational (presentations, video materials, methodical recommendations, lectures), scientific (participation in scientific developments on discipline), control (tests, situational tasks, assessment of practical skills) are used for carrying out of employment. , protection of a clinical case)

**Recommended Books:**

1. В.В.Бойко, П.М.Замятін, І.В.Полівенок, О.В.Бучнєва. – Хірургія серцевих ушкоджень (особливості сучасної доктрини). – Харків: «Промінь», 2015. – 156 с.
2. Хірургія торакальна, серцево-судинна, ендокринна. Підручник для студентів V курсів медичних факультетів медичних вузів. / Авт. кол.: В. В. Бойко, В.М. Лісовий, Л.Й. Гончаренко, І.А. Тарабан і ін.; під ред. проф. В.В. Бойка, чл.-кор. НАМНУ, проф. В.М. Лісового. - Харків, «НТМТ», 2016. - 406 с.
3. Хирургия. Часть IІ. Учебник для студентов VІ курсов медицинских факультетов медицинских вузов (Модуль 4 «Симптомы и синдромы в хирургии»: / Авт. кол.: В.В.Бойко, В.Н.Лесовой, Л.И.Гончаренко и др.; под ред. проф. В.В.Бойко; чл.-корр. НАМНУ, проф. В.Н.Лесового. – Харьков, «НТМТ», 2013. – 820 с.
4. Ангиография и рентгенэндоваскулярная хирургия торакоабдоминальных кровотеччений. : учебник / Ю.В. Авдосьев, В.В. Бойко, И.В. Белозеров и др. - Х. : ХНУ имени В.Н.Каразина, 2015. – 504 с.
5. Флорикян А.К., Зайцев В.Т. Клиника, диагностика и лечение травмы грудной клетки, ее органов и сосудов. Учебное пособие. М., 1984.
6. Лизогуб М.В., Михневич К.Г., Курсов С.В., Григоров Ю.Б та ін. Невідкладні стани та медичні маніпуляції: навчальний посібник для підготовки студентів вищих медичних навчальних закладів до практично-орієнтованого державного іспиту за спеціальностями 7.110.101 «Лікувальна справа», 7.110104 «Педіатрія», 7.110.104 «Медико-профілактична справа». За ред.. В.А.Капустника, А.А.Хижняка, М.О.Міхаліна. – Х.: «Новое слово», 2009. – 286 с.
7. Сучасна трансфузіологія: [навчально-методичний посібник] / Бойко В.В., Суслов В.В., Яворський В.В., Малигон О.І., Павлов О.О. – Х.:СПДФО Брові О.В., 2012. -200 с.
8. Комплексная диагностика и дифференцированное лечение острых тромбозов в системе нижней полой вены. Монография / Авт. Кол.: В.В.Бойко, В.А.Прасол, И.А.Тарабан, В.И.Троян, Д.В.Оклей, под ред. В.В.Бойко. – Х.: «НТМТ», 2013. – 192 с.
9. Реанімаційно-хірургічна допомога в зоні бойових дій на етапах медичної евакуації. Методичні рекомендації для студентів, лікарів-інтернів та лікарів-курсантів з грифом МОЗ та МО України. Автори: В..Бойко, П.М.Замятін, ін.. - Харків, 2014. - 40 с.
10. В.В.Бойко, П.М.Замятін, І.В.Полівенок, О.В.Бучнєва. – Хірургія серцевих ушкоджень (особливості сучасної доктрини). – Харків: «Промінь», 2015. – 156 с.
11. Секела М.В., Макаров В.В., Калабуха И.А., Жехонек А., Кузик П.В. / Невдкладністани в торакальнійхірургії: монографія у 2-х книгах. [наук. ред проф. В.В.Бойко] - Львов: СПОЛОМ, 2015. – 272с.
12. В.В.Бойко, А.Г.Краснояружський, Ю.М.Скібо, І.В.Полівенок. – Комбіновані операції на легенях і серці (особливості сучасної доктрини). – Харків: Промінь, 2016. – 160 с.

**6. Prerequisites, co-requisites, post-requisites.**

***Prerequisites.*** The study of the discipline involves the prior mastering of disciplines in medical biology, normal and pathological anatomy, normal and pathological physiology, biochemistry, microbiology, medical genetics, pharmacology and medical formulations, epidemiology and principles of evidence-based medicine, military field surgery, emergency care, emergency as well as to have practical skills of care for patients of surgical profile and their management in outpatient and inpatient settings.

***Co-requisites.*** The study of the discipline involves the joint acquisition of knowledge in the disciplines: emergency, traumatology, neurosurgery, ophthalmology, otolaryngology, oncology.

***Postrequisites.*** The main provisions of the discipline should be applied in the study of related disciplines during 6 years of study, is the basis for preparation for the licensing exam EDKI, preparation for study in higher education institutions in the programs of the third educational and scientific level of higher education.

**7. Learning outcomes, including practical skills** (list of knowledge, skills and abilities acquired by the applicant in higher education in the process of its study).

This course focuses on the main problems of the adult population on cardiovascular pathology, its diagnosis, tactics of conservative and surgical treatment, the patient's stay in the postoperative period. Clinical experience can be gained during practical classes in the leading institutions of the region (in the cardiovascular departments of the State Institution "Institute of General and Emergency Surgery named after V.T. Zaitsev NAMSU", according to the schedule. Students during the course have the opportunity to participate in curation and demonstrations of patients, as well as visits to operating rooms.That is, the course covers the main both practical and theoretical aspects of the future family doctor.

**Curriculum of the discipline**

**The content of the discipline**

**Table 2**

|  |  |
| --- | --- |
| № | **Topics** |
|
| 1. | Arterial embolism and acute arterial thrombosis of the extremities (syndrome acute ischemia of the extremities) |
| 2. | Acute thrombose of the magistral veins of the extremities. Pulmonare embolism. |
| 3. | Varicose veins disease. Endovenoustreatment. Chronic venous insufficiency. |
| 4. | Ischemic heart disease and its complications.Acute coronary syndrome. Modern treatment. Heart injuries. |
| 5. | Chronic criticial ischemia extremities, ethiology, classification, kinds of the conservative and surgical treatment. |
| 6. | Final class. Training at Differentiated credit. Patient supervision. |
| 7. | Differentiated credit |
| **Summary 60 hours** | |

**Education Thematic Plan CVS**

**Table 3**

|  |  |  |
| --- | --- | --- |
| № | Topics | Hours |
| 1 | 1 Thrombophilia - etiology, pathogenesis, clinical manifestations, principles of diagnosis and treatment. |  |
| 2 | 2 Anticoagulant and thrombolytic therapy in acute thrombosis. Prophylactic anticoagulant therapy |  |
| 3 | 3 Modern angiographic studies and X-ray endovascular interventions |  |
| 4 | 4 Surgical treatment of heart valve disease. |  |
| **Summary** | | **30** |

**Topics of practical classes**

**1.** **Arterial emboli and acute arterial thrombosis of the extremities (syndrome of acute ischemia of the extremities).**

Diagnostic criteria for arterial emboli and acute arterial thrombosis of the extremities. Methods of examination of patients with arterial emboli and acute arterial thrombosis of the extremities. Classification of arterial emboli and acute arterial thrombosis of the extremities. Tactics of management of patients with arterial embolism and acute arterial thrombosis of the extremities. Differential diagnosis with other vascular and general pathology. Indications for surgery. Indications for emergency surgery. Types of surgical interventions and tactics of postoperative period management. Complications of arterial emboli and acute arterial thrombosis of the extremities .. Complications in the postoperative period.

**2. Acute thrombosis of the main veins of the extremities. Pulmonary artery thromboembolism (PE).**

Leading clinical symptoms of acute thrombosis of the main veins of the extremities. Etiology of the disease. Examination protocol. Procedure for appointment and selection of anticoagulants. Dosage regimen and timing of anticoagulants. Bleeding risk scale. Compression treatment. Prevention of this pathology. PE - clinical manifestations. Classification. Differential diagnosis .. Examination methods. Providing emergency care to patients with pulmonary embolism. Tactics of patient management. Indications and contraindications to surgical treatment.

**3. Varicose veins of the extremities, endovenous treatment. Chronic venous insufficiency.**

Prevalence among the population, pathogenesis of CVI, classification, symptoms, modern diagnosis, surgical and endovenous treatment of CVI and varicose veins depending on the stage.

**4. Ischemic heart disease, acute coronary syndrome. Modern treatment. Heart damage.**

Risk factors and etiological factors of coronary heart disease, clinical manifestations of acute coronary syndrome, modern diagnosis, thrombolytic therapy, coronary angiography, percutaneous coronary interventions, coronary artery bypass grafting, postoperative treatment of patients with coronary heart disease. Clinical symptoms of heart damage. Features of instrumental and laboratory diagnostics. Indications for conservative and surgical treatment of patients. Types of surgical interventions. Types of endovascular interventions. Features of conservative treatment in the postoperative period.

**5. Chronic critical ischemia of the lower extremities, etiology, classification, differential diagnosis, types of surgical and conservative treatment.**

Etiology, modern classification, clinical manifestations, differential diagnosis. Endovascular treatment, modern possibilities of cellular therapy in inoperable conditions critical ischemia of the lower extremities.

**6. Final lesson. Preparation for differential test.**

Curation of the patient with filling in the "Curation Protocol".

**7. Differential credit.**

**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. You are not allowed to write off, use any kind of 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.

Visiting patients during hospitalization is possible provided that students have appropriate clothing, a health book with a diphtheria vaccination note, the results of a measles immunity test (or a vaccination mark), or other infectious diseases according to the current epidemic situation.

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 are encouraged to participate in research and conferences on this topic.

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 paragraph 1 of Article 4 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); Recommendations for Education in the Spirit of International Understanding, Cooperation and Peace and Education in the Spirit of Respect for Human Rights and Fundamental Freedoms (UNESCO); Concept of the State Social Program and men for the period up to 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).

KhNMU 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 KhNMU are confirmed by the Code of Corporate Ethics and the Charter of KhNMU.

Behavior in the audience

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 class

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 Surgery №1 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.

**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 KhNMU on the problems of professional training of surgical profile and published on the site of KhNMU, the site of the Department of Surgery №1 KhNMU.

**Evaluation policy**

To receive credit for the course "Cardiovascular Surgery" it is necessary to attend all practical classes, have the necessary level of knowledge on the topics of classes, the ability to solve questions from the license exam KROK - 2 from the course Surgery. The number of points received by a student per course depends on the level of knowledge, the degree of mastery of practical skills.

- Current - current educational activities.

- Final - differentiated test.

Assessment of individual student tasks 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

**Differentiated credit** - is conducted by the teacher of the academic group in the last lesson of the discipline. Admission to the test is determined in the points of the current educational activity, namely: minimum 70 points, maximum - 120 points.

**Table 4**

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

**(for disciplines that end with a d/c or an exam)**

| 4-poins scale | 200-points scale |  | 4-points scale | 200-points scale |
| --- | --- | --- | --- | --- |
| 5,00 | **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 | 3.00-3,03 | **70** |
| 3.95- 3,98 | 95 | **Less than 3,00** | **Not enough** |

**The minimum number of final points** that a student must score **for admission to the final certification** - **graded test** - **70 points**, **the maximum number of points for IPA**, which a student can score when studying all topics of the discipline -**120 points.**

Differential test (DR) on the subject of "Cardiovascular Surgery" is conducted by a group teacher.

Students who have scored at least the minimum number of final points for IPA - 70 points are allowed to compile the DZ.

The form of conducting DZ is standardized and according to the methodology approved by the department is carried out in two stages.

And the stage - the initial level of assessment of DZ consists of 2 parts:

1. Practical-oriented part, which involves the implementation of tasks set by the OKH at the level of basic requirements for knowledge, skills and abilities in the surgical field, and includes:

1) tasks for professional training in working with surgical patients;

2) tasks for evaluating the results of laboratory and instrumental research methods in surgical patients;

3) tasks for diagnosis and provision of emergency medical care in emergencies in surgery.

Practically-oriented part of the DZ is carried out in the form of supervision by each student of the patient on the studied subject of the discipline "Cardiovascular Surgery" with the completion of the "Protocol of supervision"

Directly differentiated test is evaluated: minimum - 50 points, maximum - 80 points. The grade in the discipline is the sum of points for the current educational activity and differentiated credit in points: minimum - 120 points, maximum - 200 points and corresponds to the national scale and the ECTS scale.

During the assessment of mastering each subject of the discipline (PND) and the final lesson (PZ) the student is graded according to the traditional 4-point system: "excellent", "good", "satisfactory" and "unsatisfactory".

The final score for current learning activities (PND) and final classes (PZ) is defined as the arithmetic mean of traditional grades for each class and PZ, rounded to 2 decimal places and listed in a multi-point scale according to Tables 1.

The recalculation of the average score for IPA and software for disciplines that end with a differentiated credit is made in accordance with Table 1. The minimum number of points that a student must score for admission to a differentiated credit - 70 points, the minimum positive score on a differentiated credit, respectively 50 points, maximum - 80 points. The maximum score for differentiated credit is 200 points, the minimum is 120 points.

Students who have completed all types of work provided for in the curriculum and scored at least the minimum number of points in the study of sections are admitted to the differentiated test.

The form of differentiated credit is standardized and includes control of theoretical (test control) and practical training (demonstration of student skills at the bedside of a sick child, solving structured situational problems, performing manipulations).

Test control includes 50 test tasks.

Students perform practical skills at the patient's bedside (assessment of the general condition of the sick child, analysis of anamnesis data, objective examination and determination of clinical changes by organs and systems, justification of preliminary diagnosis, treatment, emergency measures, etc.).

Solving a complex structured situational problem, which includes the interpretation of laboratory and instrumental research data, substantiation of clinical diagnosis, determination of therapeutic tactics, appointment of treatment or emergency care.

Exam or differentiated test in a discipline or its part is a process during which the received for a course (semester) are checked:

- level of theoretical knowledge;

- development of creative thinking;

- skills of independent work;

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

Differentiated credit is conducted by the teacher of the group at the last practical lesson, and for the session a schedule is set, approved by the rector of KhNMU, indicating the specific dates of the exams.

If the exam is not passed, the dates of re-setting during the holidays are set, until the beginning of the next semester.

Assessment in the discipline is the current educational activity (consists of the total number of points during the academic semester, which can be assessed from 70 to 120 points) + differentiated test (consists of assessment of practical skills, laboratory and instrumental research methods and problem solving) = 120 points + 80 points = 200 points.

Table 5

Correspondence of grades on a 200-point scale, four-point "national" and ECTS scale

**Table 5**

**Conversion of discipline assessment points into ECTS**

**and traditional estimates**

|  |  |  |
| --- | --- | --- |
| **Score on a 200-point scale** | **Score on a point**  **scale ESTS** | **Score on a 4-point traditional scale** |
| 200 – 180 | A | Excellent |
| 179 - 160 | B | Well |
| 159 - 150 | C | Well |
| 149 - 130 | D | Satisfactorily |
| 129 – 120 | E | Satisfactorily |
| less120 | F, Fx | Unsatisfactorily |

**The maximum number** of points that a student can score for studying the discipline - 200 points, including the maximum number of points for current educational activities - 120 points, as well as the maximum number of points according to the results of differentiated credit - 80 points. The minimum number of points is 120 points, including the minimum current educational activity - 70 and according to the results of DC - 50 points.

Head of the Department of Surgery № 1

Professor, MD Boyko V.V.