**Ministry of Health of Ukraine**

 **Kharkiv National Medical University**

**Department of Emergency Medicine, Anesthesiology and Intensive Care**

SYLLABUSE

of the

 «Emergency and Urgent Medical Aid»

 (name of academic discipline)

Academic year 2020/2021

Field of knowledge 22 "Health carу\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 (code and name of the direction of training)

Specialty / EQL 222 "Medicine", the second (master's) level

 (code and name of the specialty)

OPP "Medicine"

Course V\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |
| --- | --- |
| The program was approved at the meeting of the department of Emergency medicine, anesthesiology and intensive careProtocol «\_27\_»\_august\_\_2020 № \_14\_Head of Department \_\_\_\_\_\_\_\_\_\_\_\_\_\_ prof. Yu. Volkova (signature) (surname and initials) «\_27\_»\_\_\_\_august\_\_\_\_\_\_\_2020 | The program is approved by the methodical commission KNMU on problems of a surgical profile (name)Protocol « \_28\_ » \_\_\_august\_\_\_ 2020 № \_1\_Head of the methodical commission on problems of a surgical profile  \_\_\_\_\_\_\_\_\_\_\_\_\_\_ prof.V.O. Syplyvyi  (signature) (surname and initials) «\_\_\_\_28\_\_»\_\_\_\_\_august\_\_\_\_\_\_ 2020 |

General information about the discipline:

Course title: Anesthesiology and Intensive Care. Anesthesiology and intensive care.

PROGRAM DEVELOPERS:

1. Assoc. prof., PhD, Dolzhenko Maryna Olexandrivna

(surname, name and patronymic, position, academic title, academic degree)

2. Prof., M.D., Volkova Julia Viktorivna - Head of the Department of Emergency Medicine, Anesthesiology and Intensive Care

 (surname, name and patronymic, position, academic title, academic degree)

Information about the teacher (s) (professional interests, trajectory of professional development) with reference to the teacher's profile (on the department's website, in the Moodle system)

Contact phone and E-mail of the teacher

|  |  |
| --- | --- |
| surname, name and patronymic | Dolzhenko MarynaVolkova Yuliia  |
| Contact phone | +380501593361+380953196463 |
| E-mail: | marina25doll@gmail.comdryu.volkova@gmail.com  |
| Timetable | According to the schedule of the educational department |
| Consultations |  |

Practical classes - classroom of the Department of Emergency Medicine, Anesthesiology and Intensive Care on the basis of KNP City Clinical Hospital of Ambulance and Emergency Care named after Prof. A.I. Meshchaninov (Lane Balakireva 3a), building 2, floor 4.

Class time: Monday, Tuesday, Wednesday, Thursday, Friday (according to the timetable);

Reception of tests and face-to-face consultations are conducted by teachers of the department daily from 8am to 3pm o'clock, on Saturdays by the another teacher from 9am to 3pm o'clock.

**Discipline information.**

**Description of the discipline**.

 The discipline "Emergency and Urgent Medical Aid" is studied in the 5th year of study.The program of the discipline “Emergency and Urgent Medical Aid” for higher medical educational institutions of Ukraine of the IV levels of accreditation is based on the provisions of the Law of Ukraine “On emergency medical care” (hereinafter the Law) of July 5, 2012 № 5081-VI.

The discipline studies the peculiarities of the system of Emergency and Emergency Care and Disaster Medicine in Ukraine. The drafting takes into account the existing clinical protocols in Ukraine for emergency medicine as well as the recommendations of the European Council of Resuscitation (2010, 2015) and the All-Ukrainian NGO "All-Ukrainian Council of Resuscitation (Resuscitation) and Emergency Care".

The subject "Emergency and Emergency Care" is a clinical discipline that systematizes the previously acquired knowledge of students in human anatomy and physiology, pharmacology, hygiene, pathological anatomy, pathological physiology, military and emergency surgery, emergency surgery, therapy, traumatology and institution theoretical knowledge and practical skills in organizing and providing emergency medical care to patients in emergencies in the pre-hospital and early hospital stages, including during peacetime emergencies.

**The purpose and objectives of the discipline**

The purpose of teaching the discipline: to study the features of the organization and provision of emergency and urgent medical care to the victim / victim at the pre-hospital and early hospital stage.

**Task.**

- diagnose emergencies: under any circumstances (at home, on the street, in a medical institution, etc.), in conditions of lack of information and limited time, using standard methods of examination and data of possible anamnesis, knowledge about the person, his organs and systems, adhering to the relevant ethical and legal norms, by making an informed decision and assessing the human condition to make a diagnosis;

- to carry out medical and evacuation measures: in the conditions of an emergency situation, including martial law, during the detailed stages of medical evacuation, taking into account the existing system of medical and evacuation support, to organize medical and evacuation measures among the population and servicemen;

- to determine the tactics of emergency medical care: under any circumstances, using knowledge about the person, his organs and systems, adhering to the relevant ethical and legal norms, by making an informed decision, based on the diagnosis of emergency in a limited time using standard schemes to determine tactics of emergency medical care;

- provide emergency medical care: under any circumstances, using knowledge about the person, his organs and systems, adhering to the relevant ethical and legal norms, by making an informed decision, based on the diagnosis of emergency in a limited time according to certain tactics, using standard schemes, provide emergency medical care.

As a result of studying the discipline the student must

 **know:**

-list of urgent conditions that require emergency medical care, their etiology and pathogenesis;

 - equipping the emergency medical team, emergency department of a multidisciplinary hospital;

 -protocols for providing emergency medical care to victims (patients) at the pre-hospital and early hospital stages.

 - features of emergency medical care for mass injuries.

 **be able:**

- assess the risks of danger in the provision of emergency medical care;

- to conduct primary and secondary examination, on the basis of the obtained data to establish the leading syndrome and apply an adequate protocol for emergency medicine;

- make an ECG, measure pressure, use a pulse oximeter;

- perform cardiopulmonary resuscitation with or without the use of defibrillators;

-restore airway patency (taking Safar, Heimlich), the use of breathing tubes, laryngeal tubes and masks; use of aspirators (mechanical and automatic), Ambu bag, perform conicotomy or tracheostomy;

- stop external bleeding;

- perform immobilization of limbs, spine;

- to control profuse bleeding;

- give the unconscious a stable lateral position.

**A list of practical skills that a student must master when studying the discipline**

1. Safe position on the side.

2. Triple reception of Safar.

3. Introduction of oropharyngeal and nasopharyngeal airways.

4. Ventilation "mouth to mouth / nose".

5. Ventilation with an Ambu breathing bag and a face mask.

6. Indirect heart massage.

7. Use of manual / automatic defibrillator.

8. Stop external bleeding;

9.Perform immobilization of limbs, spine;

10.To control profuse bleeding;

11.Give the unconscious a stable lateral position.

**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 - 3 | educational program for training specialists of the second (master's)level of higher education training 22 "Health" | Normative |  |
| The total number of hours - 90 | Specialty: 222 "Medicine" | Year of preparation: |  |
| 5th |
| Semester |
| 9,10 |
| Lectures |
| Hours for full-time study:classrooms - 30independent work of the student -60 | Education level:master | 4 h |  |
| Practical, seminar |
| 26 h |
| Laboratory |
| 0 h |
| Individual work |
| 60 h |
| Individual tasks |
| Type of control:Differentiated credit |

The content of the discipline

Curriculum.

**Topic 1 “Organization of emergency and urgent medical care in Ukraine. Initial actions of medical staff in case of emergency of the patient ”.**

The concept of a single system of emergency medical care (EMC) in Ukraine. Responsibilities of healthcare professionals. Organization of the EMD service of Ukraine (structure and tasks). The main tasks, functions, rights and responsibilities of medical workers (EMD doctors, family doctors) to provide medical care to the patient (victim) in an emergency. Ethical, deontological and communicative aspects of EMD. Features of emergency medical care at the pre-hospital stage (EMD team, general practitioners - family medicine, clinics), early hospital stage (EMD department of a multidisciplinary hospital). Equipment of the EMD field team (medical devices, medicines, special equipment). Providing a family doctor's outpatient clinic and various departments of the hospital to provide EMD. Departure map of the EMD team, the rules of its design. Ergonomic principles in the work of the field team EMD (when working indoors, outdoors), teamwork. Acquaintance with EMD station. Safety instruction. Personal safety of an employee of the EMD team (medical worker) during the provision of emergency medical care (organizational measures, technical means of personal safety). Overview of the scene. Dangerous situations that are possible at the scene, tactics of medical workers and priorities in case of danger. Determining the number of victims and the need for additional assistance.

**Topic 2. "Modern means of ensuring airway patency and artificial lung ventilation in adults."**

Causes, diagnosis and treatment of airway obstruction in adults. Ensuring airway patency by throwing the head back while maintaining the jaw, taking Safar. Ensuring airway patency in trauma of the cervical spine (removal of the lower jaw forward). Revision and rehabilitation of the oral cavity by manual and hardware methods. Use of the oropharyngeal tube, ventilation of the victim's lungs through a mask using a hand-held device for artificial lung ventilation (Ambu), oxygen supply. Use of the nasopharyngeal (nasopharyngeal) tube. Indications and technique of intubation of the victim. The use of alternative methods to ensure airway patency with a laryngeal mask, laryngeal tube, combi tube. Symptoms of partial and complete airway obstruction when a foreign body enters, methods of its recovery. Heimlich's reception. Indicationsand technique of conic puncture and conicotomy. Familiarity with a portable ventilator.

**Topic 3.** **“The procedure for providing emergency medical care to victims and patients at the pre-hospital stage. Initial examination ”.**

Primary examination (ABC). Tasks of the initial examination. Technology of the conscious and unconscious patient (stabilization of the head and neck, ensuring patency of the upper respiratory tract, determining the level of consciousness on the AVPU scale, assessment of quality and frequency of respiration, the presence of central and peripheral pulse, its frequency, body temperature, skin color and moisture, capillary filling, control of profuse bleeding).

Decision-making on the provision of medical care during the initial examination: application of the neck collar, oxygen supply, elimination of life-threatening conditions (elimination of obstructive mechanical asphyxia, cessation of external bleeding, CPR). Determining further tactics at the scene for the category of patients "Download and ride"; those that require a quick head-to-toe examination and those that require a local examination. Criteria for determining the category of patients "Download and go". The concept of "platinum" half an hour and "golden" hour. The role of the mechanism of lesion in determining the severity of the patient. Communication of the team with the main base, report on the clinical situation. Assistance and preparation for transportation of the patient of the category "Load and eat" Features of transportation of patients and victims (laying on a board, a stretcher, a stretcher-chair, imposing of a neck collar, an immobilization vest, putting in salon of the EMD carriage). Technique of removing the victim from the vehicle and its transfer. Means for pre-administration of drugs, indications and techniques. Intraosseous administration of drugs. Technique of primary examination on an outpatient basis at the dentist.

**Topic 4 “Procedure for providing emergency medical care to victims and patients at the pre-hospital stage. Secondary examination ”.**

The purpose of the secondary examination. Patients to be examined quickly from head to toe at the scene. Examination technology (primary examination, assessment of consciousness on the Glasgow scale, examination, palpation of the head, assessment of pupils; examination, palpation of the neck; examination, palpation, percussion, chest auscultation; examination, palpation of the abdomen; determination of pelvic bone stability; examination, palpation lower and upper extremities, areas of the spine). Additional examination methods (electrocardiomonitoring, pulse oximetry, electrocardiography in 12 standard leads, glucometer).

Determining the presence of active and passive movements in the extremities, the strength of the muscles of the arms and legs of the patient in consciousness. Collection of anamnesis (complaints, allergies, medications, time of the last meal, transferred diseases, obtaining data on immunizations against tetanus, alcohol consumption, finding out the circumstances of the lesion). Establishing an emergency. Determining the treatment protocol for emergency medicine. Criteria for determining patients subject to local examination. Local survey technology.

Establishing a preliminary diagnosis in emergency medicine. Features of secondary examination on an outpatient basis.

**Topic 5. “Circulatory and respiratory arrest. Technology of providing emergency medical care to adults”.**

The concept of terminal states. Clinical death, its symptoms. Absolute and relative signs of biological death. Causes of inefficient blood circulation. Diagnosis of sudden death. Classification and assessment of heart rate in cardiac arrest. Cardiopulmonary resuscitation technology for ventricular fibrillation, ventricular tachycardia, pulseless electrical activity, asystole in adults according to the protocol of the European Council of Resuscitation in 2017.

Diagnosis of the causes of cardiac arrest, which can be eliminated during resuscitation - four H: hypoxia, hypovolemia, hyper / hypokalemia, hypomagnesemia, acidosis, hypothermia; four T: tension (tense) pneumothorax, cardiac tamponade, thromboembolism, toxic overdose. Technique of express ECG registration during resuscitation. Technique of defibrillation by manual defibrillator. Chest pressure technique. Pharmacotherapy for cardiac arrest. Technology of cardiopulmonary resuscitation in the presence of an automatic defibrillator. Duration of cardiopulmonary resuscitation, signs that indicate its effectiveness and the possibility of termination. Post-resuscitation support. Errors and complications that occur during cardiopulmonary resuscitation.

**Topic 6. "Diagnosis and treatment of emergencies at the scene"**

Diagnosis and treatment at the prehospital stage of acute coronary syndrome, cardiogenic shock, hypertensive crisis, anaphylactic shock, laryngeal edema, Quincke's edema, hypothermia, drowning, electric shock, coma of unknown etiology, coma in diabetes mellitus, poisoning and poisoning approved protocols for emergency medicine.

**Topic 7.**  **"Emergency medical care for mechanical injuries"**

Diagnosis and treatment at the prehospital stage of mechanical injuries of the skull, spine, chest, abdominal organs, pelvis and pelvic organs, limbs. Diagnosis and tactics of the visiting team with polytrauma, long-term compression and crushing syndrome, external and internal bleeding, traumatic and hemorrhagic shock, hemo- and pneumothorax. Algorithm for providing emergency medical care to victims of road accidents. Techniques to stop external bleeding. Technique of transport immobilization of different bone segments at the prehospital stage. Chest puncture in severe pneumothorax. Occlusive dressing.

**Topic 8. "Emergency care for mass injuries"**

Procedure of ambulance crews in the center of mass destruction. Interaction with rescue services, the responsibility of each of them. Organization of a medical sorting zone, a medical care zone (medical point) and a transport zone (evacuation). Primary medical sorting according to the START system. Rules for using sorting bracelets and coupons.

**The structure of the discipline**

|  |  |
| --- | --- |
| Names of sections of the discipline and topics | Number of hours |
| Form of study (full-time) |
| total | Including |
| Lec | pr | lab | ind | iw |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Discipline section 1 |
| Topic 1. Organization of emergency and urgent medical care in Ukraine. Initial actions of medical workers in case of emergency of the patient. |  | 2 | 2 |  |  | 18 |
| Topic 2. Modern means of ensuring airway patency and artificial lung ventilation in adults. |  |  | 2 |  |  | 4 |
| Topic 3. The procedure for providing emergency medical care to victims and patients at the pre-hospital stage. Initial examination. |  |  | 4 |  |  | 20 |
| Topic 4. The procedure for providing emergency medical care to victims and patients at the pre-hospital stage. Secondary examination. |  |  | 4 |  |  | 6 |
| Topic 5. Stopping blood circulation and respiration. Technology of providing emergency medical care to adults. |  | 2 | 4 |  |  | 12 |
| Topic 6. Diagnosis and treatment of emergencies at the scene. |  |  | 4 |  |  | 12 |
| Topic7. Emergency medical care for mechanical injuries. |  |  | 2 |  |  | 16 |
| Topic 8. Emergency medical care for mass injuries. |  |  | 2 |  |  | 2 |
| Final modular control |  |  | 2 |  |  |  |
| Total | 90 | 4 | 26 | - | - | 60 |

 **Thematic plan of lectures**

|  |  |  |
| --- | --- | --- |
| № | Title of the lecture topic | Number of hours |
| 1 | Organization of emergency and urgent medical care in Ukraine. Initial actions of medical workers in case of emergency of the patient. | 2 |
| 2 | Circulatory and respiratory arrest. Technology of providing emergency medical care to adults. | 2 |
| Hours in general | 4 |

 **Thematic plan of practical lessons of the module.**

|  |  |  |
| --- | --- | --- |
| №  | Topic | Number of hours |
| 1 | Organization of emergency and urgent medical care in Ukraine. Initial actions of medical workers in case of emergency of the patient. Emergency medical care for mass injuries. | 4 |
| 2 | The procedure for providing emergency medical care to victims and patients at the pre-hospital stage. Initial examination. | 4 |
| 3 | The procedure for providing emergency medical care to victims and patients at the pre-hospital stage. Secondary examination. | 4 |
| 4 | Circulatory and respiratory arrest. Technology of providing emergency medical care to adults. | 4 |
| 5 | Diagnosis and treatment of emergencies at the scene. Modern means of ensuring airway patency and artificial lung ventilation in adults. (1 part) | 5 |
| 6 | Modern means of ensuring airway patency and artificial lung ventilation in adults. (2 parts). Emergency medical care for mechanical injuries. Differentiated credit. | 5 |
| Total | 26 |

 **Individual work.**

|  |  |  |
| --- | --- | --- |
| №  | Topic  | Number of hours |
| 1 | Initial actions of medical workers in case of emergency of the patient. | 18 |
| 2 | Modern means of ensuring airway patency and artificial lung ventilation in adults. | 4 |
| 3 | The procedure for providing emergency medical care to victims and patients at the pre-hospital stage. Initial examination. | 20 |
| 4 | Diagnosis and treatment of emergencies at the scene. | 6 |
| 5 | The procedure for providing emergency medical care to victims and patients at the pre-hospital stage. Secondary examination. | 12 |
| 6 | Circulatory and respiratory arrest. Technology of providing emergency medical care to adults. | 12 |
| 7 | Emergency medical care for mass injuries. | 16 |
| 8 | Emergency medical care for mass injuries. | 2 |
| Total | 90 |

**Individual tasks**.

- Preparation of refinement on the subject of discipline.

- Preparation of student scientific work on the subject of discipline

**Teaching methods**

The basic types of educational activity of students according to the curriculum are:

- verbal (lecture, explanation, story, conversation);

- visual (observation, illustration, demonstration);

- practical (performing manipulations).

 **Methods of control**

Control forms and evaluation system are carried out in accordance with the requirements of the program of discipline and instruction about the system of evaluation ofeducational activity of students at the creditmodule system of organization of educational process, Ukraine ratified Health Care Ministry

**Include:**

 - oral control;

 - written control, test control;

- practical skills check;

**Types of control:**

- previous (incoming);

- current;

- final modular control.

List of questions to diff. credit, tasks to test practical skills during diff. (including texts of lectures and methodical instructions for students that can be used for preparation and which are placed on the page of the department in the reposition of KhNMU, materials on the page of the department in the distance education system Moodle).

***Discipline policy.***

 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.

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 immune 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' participation in research and conferences on this topic is encouraged. The student can earn additional points for participation in writing abstracts or preparing an abstract and its defense in class (2 points), active participation in the discussion of topics (1 point per topic). In total no more than 10 points for discipline.

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 determine an effective mechanism for resolving conflict situations related to discrimination and sexual harassment. 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; Cultural Rights; UN Committee on Economic, Social and Cultural Rights); Recommendations on education 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' offices, faculties, institutes and the Center for Gender Education, members of the student government and ethics committee, vice-rector for research and teaching) are confidential regarding 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.

 **Evaluation of students' academic success in the ects of the organization of the educational process (credit, differential credit, exam) - Differential credit**

1. Evaluation of current learning activities

Control forms and evaluation system are carried out in accordance with the

requirements of the program of discipline and instruction about the system

of evaluation of educational activity of students at the creditmodule system of organization of

educational process, Ukraine ratified Health Care Ministry

Conversion of the current rating, given on the traditional 4-point scale, into a

multivariate one at each session. At the end of all sessions, the module calculates the average score of current performance on the traditional scale, which is converted into points for current performance (table. 1).

Table 1

**Matching the average score of your current performance to the traditional 4- a point scale of the total assessment of current performance per module**

|  |  |  |  |
| --- | --- | --- | --- |
| The average score current success by 4-points scale | Scores for the current one success after conversion the average score | The average score current success on a 4-point scale | Scores for the current one success after conversion the average score |
| 2,00 | 0 | 3,55 | 85 |
| 2,05 | 49 | 3,60 | 86 |
| 2,10 | 50 | 3,65 | 87 |
| 2,15 | 52 | 3,70 | 89 |
| 2,20 | 53 | 3,75 | 90 |
| 2,25 | 54 | 3,80 | 92 |
| 2,30 | 55 | 3,85 | 93 |
| 2,35 | 56 | 3,90 | 94 |
| 2,40 | 58 | 3,95 | 95 |
| 2,45 | 59 | 4,00 | 96 |
| 2,50 | 60 | 4,05 | 97 |
| 2,55 | 61 | 4,10 | 98 |
| 2,60 | 62 | 4,15 | 99 |
| 2,65 | 64 | 4,20 | 101 |
| 2,70 | 65 | 4,25 | 102 |
| 2,75 | 66 | 4,30 | 103 |
| 2,80 | 67 | 4,35 | 104 |
| 2,85 | 69 | 4,40 | 106 |
| 2,90 | 70 | 4,45 | 107 |
| 2,95 | 71 | 4,50 | 108 |
| 3,00 | 72 | 4,55 | 109 |
| 3,05 | 73 | 4,60 | 110 |
| 3,10 | 74 | 4,65 | 111 |
| 3,15 | 75 | 4,70 | 113 |
| 3,20 | 77 | 4,75 | 114 |
| 3,25 | 78 | 4,80 | 115 |
| 3,30 | 79 | 4,85 | 116 |
| 3,35 | 80 | 4,90 | 118 |
| 3,40 | 82 | 4,95 | 119 |
| 3,45 | 83 | 5,00 | 120 |

 **Conducting and assessing a differentiated test or exam (table 3, 4 or 5 of the "instructions for assessing the educational activities of students").**

**The final control**

Final control is carried out on completion of study all subjects topics on the last control employment from the module. The final control students who attended all the prescribed curriculum for classroom training during the study module scored score not less than the minimum (50 points).

The form of the final control include control of theoretical and practical training.

1. Test of theoretical knowledge:

-Individual survey (for the tickets in writing or orally)

-Test control (using tests of different formats)

-Common decision of situational problems

2. Control practices and their results.

The maximum number of points that a student can get during the final module control is 120. Final control is considered passed if the student scored at least 80 points.

**Assessment in the discipline**

 Evaluation of the assessment of the discipline is put only to students who have completed all modules of discipline.

The maximum number of points is awarded to students at the module (test credit ECTS) - 200 Number of points (score) that came with student discipline, defined as the average number of points from all modules of discipline.

 Student, who had good reason blanks classes, introduced to individual curriculum and academic debt permitted to work up to a certain limit. For students who missed training sessions without good reason, the decision taken on their working dean.

 Student assessment can improve the discipline by retaking of final module control (no more than 3 times for the entire period of study), I may rector for educational work. Students who are enrolled in one specialty, are ranked on a scale based on the number of ECTS points gained in the discipline.

 Current student evaluation is based on a 4-point scale. Assessment of performance is integrated (all types of student work are evaluated both during the preparation for the class and during the class) according to the criteria that are made known to the students at the beginning of the study of the respective discipline. The following criteria are used to evaluate students' knowledge:

- *"excellent"* - the student has at least 90% knowledge of the subject as under

both survey time and test time. Well oriented in the subject terminology. It clearly states the answers to the questions asked. Practical the work is done in full.

- *"good"* - the student has knowledge of at least 75-89%, makes minor mistakes, which he corrects when answering the questions. Under test time answers 75-89% of the questions. Practical work made in full, minor errors are allowed.

*- "satisfactory"* - the student possesses knowledge on a subject in volume not less

60-74% answer 60-74% of the questions during the test.

The answers are not accurate enough, the guidance questions do not correct them. Not in full practical work has been done.

- *"unsatisfactory"* - the student has not acquired the required minimum knowledge of topics of study and testing within 59%. Unable to respond to guidance question, operates with inaccurate formulations. Test task controls were performed by less than 59%. He has no practical skills.

**Technology of discipline assessment (table 6 of the "instructions for assessing the educational activities of students…").**

The maximum score of the total module control is 80 points. The minimum score of the total modular control with which the control is considered to be folded is 50 points. The scale of conversion of the number of points per module in the traditional assessment on a 5-point scale is carried out according to table 2.

Table 2

**Assessment ECTS converted to a traditional four-point scale as follows:**

|  |  |  |
| --- | --- | --- |
| Full mark points of the discipline | **ЕСТS mark** | **Evaluation of the national scale** |
| 180-200 | A | Excellent / 5 |
| 160-179 | B  | Very well, Good / 4 |
| 150-159 | C | Good / 4 |
| 130-149 | D | Satisfactory / 3 |
| 129-129 | E | Satisfactory / 3  |
| Less then 120 | FX | Poor / 2, with the possibility of re-drafting  |
| Less then 120 | F | Poor, with obligatory repeated course |

In details:

**A.** -the student shows special creative abilities;

-student is able to acquire knowledge independently, without the help of the teacher finds and processes the necessary information;

-student is able to use the acquired knowledge and skills for decision-making in unusual situations, convincingly argues answers, independently reveals own talents and propensity.

**B.** -the student is fluent in the studied amount of material, applies it in practice, freely solves exercises and problems in standard situations, independently corrects mistakes, the number of which is insignificant.

**C.** -the student is able to compare, summarize, systematize information under the guidance of a teacher;

-as a whole to apply it independently in practice;

-control their own activities;

-to correct mistakes, among which there are significant ones, to choose arguments to confirm opinions.

**D.** -the student reproduces a significant part of the theoretical material, shows knowledge and understanding of the basic principles; student can analyze the educational material, correct mistakes, among which there are a significant number of significant ones with the help by teacher.

**E.** -the student has the educational material at a level higher than the initial, a significant part of it is reproduced at the reproductive level

**FX.** -the student has the material at the level of individual fragments, which is an insignificant part of the study material

**F.** -the student has the material at the level of elementary recognition and reproduction of individual facts, elements, objects.

Grade "FX" assigned to students who score a minimum number of points for current educational activity, but who are not enrolled in the final credit control. This category of students has the right to retake control of the final credit approved schedule.

Repeat of final credit control allowed no more than two times.

 Grade "F" is assigned to students who attended all sessions of lecture, but do not meet the minimum number of points for current educational activity and is not admitted to the final credit control. This category of students has the right to re-study module in accordance with the regulations.

**Methodical support**

1. Curriculum;

2. Plans of lectures, practical classes and independent work of students;

3. Abstracts of lectures on the discipline;

4. Methodical developments for the teacher;

5. Methodical instructions for practical classes for students;

6. Methodical materials that provide independent work of students;

7. Test and control tasks for practical classes;

8. Questions and tasks to control the assimilation of the section;

9. List of questions for the exam or diff. test, a task to test practical skills during an exam or diff. credit.

10. Videos;

11. Multimedia presentations.

**LIST OF PRACTICAL SKILLS OF DISCIPLINE**

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| The module |
| 1. Perform artificial respiration, indirect heart massage.2. Fix the tongue.3. Restoration of airway patency.4. Stop external bleeding.5. Carry out primary treatment of the wound.6. Carry out transport immobilization.7. Determine blood groups, rhesus affiliation.8. Transfuse blood components and blood substitutes.9. Apply a bandage "cap".10. Apply a bandage to the breast.11. Apply an occlusive dressing for penetrating damage to the thoracic cavity.12. Apply a spike bandage to the shoulder joint.13. Apply a "turtle" bandage on the elbow joint.14. Apply a bandage to Hippocrates.15. Apply a bandage to the back of the head.16. Apply a bandage to both eyes.17. Apply a bandage "bridle".18. Apply a sling-like bandage.19. Apply a bandage Deso.20. Apply a Velpo bandage.21. Apply a bandage "knight's glove".22. Apply a bandage on the brush and fingers type (glove).23. Determine the individual and rhesus compatibility of the blood of the donor and recipient.24 Macroscopic assessment of blood quality.25. Stop arterial bleeding with finger pressure.26. Stop arterial bleeding from the forearm with a tourniquet.27. Stop arterial bleeding from the forearm and shoulder by twisting.28. Choose tools for the operation of vascular ligation during.29. Carrying out the closed massage of heart of artificial respiration "mouth to mouth", "mouth to nose" on a phantom30. Carrying out transport immobilization of the upper and lower extremities.31. Palpation of peripheral arterial vessels.32. Diagnosis of osteomyelitis on radiographs.33. Diagnosis of bone tuberculosis by radiographs.35. Conducting an objective examination of the chest.36. Conducting an objective examination of the abdominal cavity.37. Conducting an objective examination of the musculoskeletal system, determining the absolute and relative length of the limbs.38. Determination of the duration of bleeding and blood clotting time39. Local anesthesia34. Conducting an objective examination of the head and neck. |

 **A LIST OF QUESTIONS  FOR FINAL CONTROL**

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| 1. Organization of the emergency medical care service of Ukraine (regulatory framework).2. Organizational structure, main tasks and functions of the center of emergency medical care and disaster medicine.3. The main tasks, functions, rights and responsibilities of the emergency (ambulance) team.4. Table of equipment and personal safety equipment of the emergency (ambulance) team.5. Organizational structure, main tasks, functions and equipment of the department of emergency (emergency) medical care of a multidisciplinary hospital.6. Purpose, ethical, deontological and legal aspects of emergency medical care for victims at the pre-hospital stage.7. Inspection of the scene, ensuring the personal safety of medical staff, safety of witnesses and the victim, approaching the victim (patient).8. Ergonomic principles in the work of the field team EMD (when working indoors, outdoors), teamwork.9. Initial Review (ABC). Tasks of the initial inspection. Technology of carrying out at the conscious and unconscious patient.10. Provision of medical care during the initial examination. Determining further tactics at the scene.11. Tasks of secondary inspection. Indications for a secondary inspection at the scene and on the way to evacuation. Technology of secondary (ABCDE) examination of the victim (patient).12. Pathogenesis, clinic, diagnosis and treatment of airway obstruction in patients of different ages.13. Ensuring airway patency by throwing the head back or removing the lower jaw (forward). Triple reception of Safar.14. Ensuring airway patency in trauma of the cervical spine.15. Revision and cleaning of the oral cavity by manual and hardware methods.16. The use of oropharyngeal (oropharyngeal) and nasopharyngeal (nasopharyngeal) tube.17. Ventilation of the victim's lungs through a mask using a hand-held device for artificial lung ventilation (Ambu), oxygen supply.18. Indications and technique of intubation of the victim.19. The use of alternative methods to ensure airway patency with a laryngeal mask, laryngeal tube, combi tube.20. Symptoms of partial and complete airway obstruction when a foreign body, methods of its recovery. Heimlich's reception.21. Indications and technique of conic puncture and conicotomy.22. The concept of terminal states. Diagnosis of clinical death. Absolute and relative signs of biological death.23. Causes of inefficient blood circulation. Diagnosis of sudden death.24. Classification and assessment of heart rate in cardiac arrest.25. Technology of cardiopulmonary resuscitation in ventricular fibrillation in adults.26. Technology of cardiopulmonary resuscitation in ventricular tachycardia in adults.27. Technology of cardiopulmonary resuscitation with pulseless electrical activity in adults.28. Technology of cardiopulmonary resuscitation in asystole in adults.29. Diagnosis of causes of cardiac arrest, which can be eliminated during resuscitation - four "H": hypoxia, hypovolemia, hyper / hypokalemia, hypomagnesemia, acidosis, hypothermia; four "T": tension pneumothorax, cardiac tamponade, thromboembolism, toxic overdose.30. Pharmacotherapy for cardiac arrest.31. Technology of cardiopulmonary resuscitation in the presence of an automatic defibrillator.32. Duration of cardiopulmonary resuscitation, signs that indicate its effectiveness and termination.33. Post-resuscitation support.34. Errors and complications that occur during cardiopulmonary resuscitation.35. Legal and ethical aspects of cardiopulmonary resuscitation .36. Diagnosis and emergency medical care for acute coronary syndrome.37. Diagnosis and emergency medical care for cardiogenic shock.38. Diagnosis and emergency medical care in hypertensive crisis.39. Diagnosis and emergency medical treatment for anaphylactic shock.40. Diagnosis and emergency medical care for hypothermia.41. Diagnosis and emergency medical care in case of drowning.42. Diagnosis and emergency medical care in case of electric shock.43. Diagnosis and emergency medical care for coma of unknown etiology.44. Diagnosis and emergency medical care for insects associated with diabetes.45. Diagnosis and emergency medical care in case of unknown gas poisoning.46. ​​Diagnosis and emergency medical care in case of poisoning by an unknown substance.47. Diagnosis and emergency medical care for mechanical injuries of the skull.48. Diagnosis and emergency medical care for mechanical spinal injuries.49. Diagnosis and emergency medical care for mechanical injuries of the chest.50. Diagnosis and emergency medical care for mechanical injuries of the abdominal cavity, pelvis and pelvic organs.51. Diagnosis and emergency medical care for mechanical injuries of the extremities.52. Diagnosis and emergency medical care for polytrauma.53. Diagnosis and emergency medical care for long-term compression and crushing syndrome.54. Diagnosis and emergency medical care for external and internal bleeding.55. Diagnosis and emergency medical care for traumatic shock.56. Diagnosis and emergency medical care for hemorrhagic shock.57. Diagnosis and emergency medical care for hemo- and pneumothorax.58. Algorithm of actions of the emergency medical care team in case of a traffic accident.59. General principles of detoxification therapy at the prehospital stage. Andidot therapy.60. Procedure of emergency medical care brigades in a safe center of mass destruction.61. Primary medical sorting according to the START system.62. Rules for the use of sorting bracelets and coupons.63. The concept of crews is constantly ready in the first place. specialized brigades of constant readiness of the second turn, mobile field brigades, their formation and tasks.64. The role of emergency departments of multidisciplinary hospitals in optimizing the provision of medical care for mass injuries. |
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 **Recommended reading**

**Basic**

1. Law of Ukraine of July 5, 2012 № 5081-VI “On Emergency Medical Care”.

2. Emergency medicine: ambulance and emergency care / IS Zozulya, A.V. Vershigora, VI Bobrova and others; for order. IS Zozuli. − K .: VSV “Medicine”, 2012. − 728 p.

3. Emergency medical care: pre-hospital stage − manipulation algorithms (basic level). − G.G. Roschin, AA Gudima, V.Yu. Kuzmin and others. − K., 2012 − 84 p.

4. Emergency and urgent medical care. Volume 1.-Help for the injured at the prehospital stage: a national textbook / V.O. Кирилюка, С.О. Guriev, GV Zagorodniy, AA Hudyma, N.I. Iskra and others. - Kyiv. - 2017. –504 p.

5. Dubrov, SA Cardiopulmonary resuscitation / SA Dubrov, FS Glumcher // Internal Medicine. - 2008. - № 4. - P. 46–51.

6. Emergency medical care (acute heart condition) / GG Roschin, OM Parkhomenko, VO Krylyuk and others: ed. G.G. Roshchina. - Kyiv: Interservice, 2011. − 159 p

**Auxiliary**

1. Advanced Trauma Life Support (Atls) Program for Physicians, Committee On Trauma, American College of Surgeons. 9th Edn. Chicago: American College of Surgeons; 2012.

2. Anaesthesia, Trauma and Critical Care. Course Manual. The Atacc Group Eighth Edition, 2014, - 460 Pp.

3. Cantillon P, Wood D (Eds). Abc of Learning and Teaching in Medicine. – 2nd Ed. Wileyblackwell, 2010. -98 Pp. 24

4. Corey S. Anesthesia for Trauma. Scher, Ed. Springer Science+Business Media New York, 2014. 461 Pp.

5. Hasan A. Handbook of Blood Gas/Acid-Base Interpretation. Springerverlag London, 2013, - 345 Pp.

6. Snyder D, Tsou A, Schoelles K. Efficacy of Prehospital Application of Tourniquets And Hemostatic Dressings To Control Traumatic External Hemorrhage. 2014, -147 Pp. Available At: [Www.Ems.Gov](http://Www.Ems.Gov).

7. Tisherman Sa, Forsythe Rm (Eds).Trauma Intensive Care. Oxford University Press 2013, - 350 Pp.

8.Anthony J. Handley, Rudolph Koster, Koen Monsieurs at all / Adult basic life support and use of automated external defibrillators. European Resuscitation Council Guidelines for Resuscitation 2005.

9.Deitch Е.А. Burn Management // Intensive Care Medicine / Edited Bу J.М. Rippe, R.S. Irwin, М.Р. Fink, F.В. Cerra. - Vol. I.I.- Boston; New York; Toronto; London: Little, Brown & Со. – 1965 p.

10.International Liaison Committee on Resuscitation. / Adult basic life support. European Resuscitation Council Guidelines for Resuscitation 2005.

11.Paraskos J.А. Cardiopulmonary Resuscitation ∕∕ Intensive Care Меdicinc ∕ Edited Bу J.М. Rippe, R.S. Irwin, М.Р. Fink, F.В. Сеnа. Val. 1. - Boston; New Уork; Toronto; London: Little, Brown & Со., Р. 307336

12.Peter J.F. Baskett, Jerry P. Nolan, Anthony J. Handley at all / Principles of training in resuscitation. European Resuscitation Council Guidelines for Resuscitation 2005.

**Information resources**

1. Official Site Of The European Resuscitation Council - [Https://Www.Erc.Edu/](https://Www.Erc.Edu/)

2. Official Site Of The Association Of Anesthesiologists Of Ukraine - [Http://Aay.Org.Ua](http://Aay.Org.Ua)

 3. Official Site Of The Association Of Anesthesiologists, Kyiv - Http: // Http: //Criticalcare.Kiev.Ua

4. Official Site Of The European Association Of Anesthesiologists -Http: //Www.Euroanesthesia.Org

5. Official Site Of The European Intensive Care Association - Http://Www.Esicm.Org 25

6. Official Site Of The American Association Of Anesthesiologists [Http://Www.Asahq.Org/Homepageie.Html](http://Www.Asahq.Org/Homepageie.Html)

7. Official Site Of The International Scientific Periodical Emergency Medicine Journal - [Https://Emj.Bmj.Com/](https://Emj.Bmj.Com/)

8. The Fictitious Website Of The International Scientific Periodical, Journal Of Emergency Medicine, [Https://Www.Jem-Journal.Com/](https://Www.Jem-Journal.Com/)

9. The Official Journal Of The American Journal Of Emergency Medicine - [Https://Www.Jamjournal.Com/](https://Www.Jamjournal.Com/)

10. Official Site Of The International Scientific Periodical Anesthesiology - [Http://Www.Anesthesiology.Org](http://Www.Anesthesiology.Org)

11. Official Site Of The International Scientific Periodical Anesthesia And Analgesia - [Http://Www.Anesthesia-Analgesia.Org](http://Www.Anesthesia-Analgesia.Org)

12. British Journal Of Anaesthesia Official Website Of The British Scientific Periodical - [Http://Www.Bja.Oupjournals.Org](http://Www.Bja.Oupjournals.Org)

13. British Medical Journal Official Website - [Http://Www.Bmj.Com](http://Www.Bmj.Com)

14. Canadian Journal Of Anaesthesia Official Website Of The Canadian Scientific Periodical - [Http://Www.Cja-Jca.Org](http://Www.Cja-Jca.Org)

15. Official Site Of The International Scientific Periodical The Lancet - [Http://Www.Thelancet.Com](http://Www.Thelancet.Com)

16. Official Site Of The British Scientific Periodicals History Of Anesthesia Society - [Http://Www.Histansoc.Org.Uk](http://Www.Histansoc.Org.Uk)

17. Scopus Scientific Literature Search Resource - [Https://Www.Scopus.Com](https://Www.Scopus.Com)

18. Web Os Science Fiction Search -Http: //Ipscience.Thomsonreuters.Com/Product/Webof-Science/

19. Cochrane Collaboration Medical Literature Search Resource - [Http://Www.Cochrane.Org](http://Www.Cochrane.Org)

20. Pubmed Medical Literature Search Resource - [Http://Www.Ncbi.Nlm.Nih.Gov/Pubmed/](http://Www.Ncbi.Nlm.Nih.Gov/Pubmed/)

21. Medical Literature Search Resource (Anesthesiology And Intensive Care Unit - Http://Www.Twirpx.Com/Files/Medicine/Anaesthesiology/Anesthesio