

PRIVATE HIGHER EDUCATIONAL INSTITUTION
"INTERNATIONAL ACADEMY OF ECOLOGY AND MEDICINE"
Department of internal medicine with a course in psychiatry and narcology

WORKING PROGRAM
EDUCATIONAL DISCIPLINE

"Emergency and urgent medical care"

LEVEL OF HIGHER EDUCATION Second (master's) level
DEGREE OF HIGHER EDUCATION Master's degree
FIELD OF KNOWLEDGE 22 Health care
SPECIALTY 222 Medicine

Reviewed and approved
at a meeting of the Academic Council
Protocol No. 1 dated August 31, 2018

Kiev 2018

Working program in the discipline " **Emergency and emergency medical care** " for the training of students of the second (master's) higher education level of higher education in specialty 222 Medicine.

Introduction

The program of the study discipline "Emergency and urgent medical care" is compiled in accordance with the educational and professional program for the training of specialists of the second (master's) level of specialty 222 Medicine, fields of knowledge 22 Health care, the Law of Ukraine "On Higher Education" dated 07.01.2014 r. No. 1556- VII (art. 13, clause 7), the provision "On the organization of the educational process at the "International Academy of Ecology and Medicine" educational institution", methodical recommendations approved by the Central Methodical Office of Higher Medical Education of the Ministry of Health of Ukraine regarding the development of programs of educational disciplines in accordance with industry standards of higher education, in accordance with the requirements for the development of educational programs of educational disciplines (Order of the Ministry of Health of Ukraine No. 492 dated 12.10.2004 "On making changes and additions to the Recommendations on the development of educational programs of educational disciplines").

The discipline "Emergency and emergency medical care" belongs to the Professional training section of the training plan for students of higher education of the second educational (master's) level.

Description of the academic discipline

Name of indicators	Field of knowledge, specialty. level of higher education	Characteristics of the academic discipline	
		full-time education	
The number of credits is 1.5	Branch of knowledge: 22 Health care	Year of training:	
Sections - 1	Specialty: 222 Medicine	5th	
Content sections - 1		Semester:	
The total number of hours is 45		9th	
	Educational level: Master of Medicine	Lectures	
		4 hours	
		Practical	
		26 hours	
		Independent (individual) work	
		15 hours	
		Type of control: current and final control	

The subject of study of the academic discipline is the systematization of 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 studying the basics of theoretical knowledge and instilling practical skills in

organization and provision of emergency medical care to patients in emergency situations at the pre-hospital and early hospital stages, including during peacetime emergencies.

1. The purpose and tasks of the educational discipline:

1.1. The purpose of teaching the academic discipline "Emergency and urgent medical care ":

- diagnosis of emergency conditions: under any circumstances (at home, on the street, in a medical institution, etc.), in conditions of lack of information and limited time, using standard examination methods and possible anamnesis data, knowledge about a person, his organs and systems, following the relevant ethical and legal norms, by making a reasoned decision and assessing the person's condition, make a diagnosis;
- carrying out medical evacuation measures: in emergency situations, including martial law, during the deployed 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 military personnel;
- determining the tactics of providing emergency medical aid: under any circumstances, using knowledge about a person, his organs and systems, observing the relevant ethical and legal norms, by making a reasoned decision, based on the diagnosis of an emergency condition in a limited time using standard schemes to determine emergency medical care tactics;
- provision of emergency medical aid: under any circumstances, using knowledge about a person, his organs and systems, observing the relevant ethical and legal norms, by making a reasoned decision, based on the diagnosis of an emergency condition in a limited time, according to the defined tactics, using standard schemes, provide emergency medical assistance.

1.2. Basics and objectives of studying the discipline "Emergency and urgent medical care" is:

to be able to diagnose, determine treatment tactics and provide emergency medical care in accordance with existing protocols for emergency medicine:

asphyxia

hypertensive crisis

acute respiratory failure

acute poisoning

electric shock

external bleeding

circulatory arrest and breathing coma

swelling of the larynx, Quincke's edema

faint

hypothermia

drowning

shocks

1.3 . Competences and learning outcomes, the formation of which helps " Emergency and emergency medical care " discipline.

According to the requirements of the Standard of Higher Education, the discipline " Emergency and emergency medical care " ensures that students acquire the following *competencies*:

Know:

- diagnosis of emergency conditions;
- symptoms and course of diseases;
- methods of diagnostic and therapeutic procedures appropriate for specific disease states;
- ethical, social and legal conditions for practicing the medical profession and the principles of health promotion, based on scientific evidence and accepted standards;
- the causes, symptoms, diagnostic and therapeutic management principles for the most common diseases requiring surgical intervention, taking into account the distinctness of childhood age, including in particular: 1) acute and chronic abdominal diseases, 2) thoracic diseases, 3) diseases of extremities and head, 4) fractures of bones and injuries to organs;
- rules of qualification for basic surgical procedures and invasive diagnostic and therapeutic procedures, rules of their performance and the most frequent complications;
- indications and rules for the use of intensive care;
- guidelines for cardiopulmonary resuscitation of newborns, children and adults;
- principles of functioning of the integrated system Rescue Services around the World;
- problems of modern imaging examinations, in particular: 1) radiological symptomatology of major diseases, 2) instrumental methods and imaging techniques used to perform therapeutic procedures, 3) the indications, contraindications and preparation of the patient for particular types of imaging examination and contraindications for the use of contrast agents;
- procedure in accidental and posttraumatic hypothermia;
- causes, symptoms, principles of diagnosis and therapeutic management in case of the most frequent diseases of the central nervous system in the scope: 1) cerebral edema and its consequences, with particular reference to emergencies, 2) other forms of intracranial tightness with their consequences, 3) craniocerebral injuries, 4) vascular defects of the central nervous system, 5) neoplastic tumors of the central nervous system, 6) diseases of the vertebral column and spinal cord;
- carrying out medical evacuation measures: in emergency situations, including martial law;
- determination of emergency medical care tactics under any circumstances;
- provision of emergency medical care: under any circumstances;
- the sequence of actions of emergency medical aid teams in case of mass injuries.

Be able to:

- ✓ Draw conclusions when diagnosing emergency conditions.
- ✓ Determine the tactics of providing emergency medical care.
- ✓ Interpret key issues of legislative acts and regulatory documents on emergency and emergency medical care.
- ✓ To draw conclusions about the presence of an emergency condition in a wounded, sick, injured person.
- ✓ Identify medical problems and prioritize medical management.
- ✓ Identify life-threatening conditions that require immediate medical intervention.
- ✓ Plan the diagnostic procedure and interpret its results.
- ✓ Implement appropriate and safe therapeutic treatment and predict its effects.
- ✓ Plan own learning activities and constantly learn in order to update own knowledge.
- ✓ Inspire the learning process of others.
- ✓ Communicate with the patient and his family in an atmosphere of trust, taking into account the needs of the patient.
- ✓ Communicate and share knowledge with colleagues in a team.
- ✓ Critically evaluate the results of scientific research and adequately justify the position.
- ✓ Adhere to the principles of asepsis and antisepsis.
- ✓ Manage a simple wound, put on and change a sterile surgical dressing.
- ✓ Make a peripheral puncture.
- ✓ Examine breasts, lymph nodes, thyroid gland and abdominal cavity in terms of acute abdomen and perform digital rectal examination.
- ✓ Evaluate the result of a radiological examination in the most common types of fractures,

- particularly long bone fractures.
- ✓ Perform temporary immobilization of the limb, choose the type of immobilization necessary for use in typical clinical situations and control the correctness of blood supply to the limb after the insertion of the immobilizing dressing.
 - ✓ Manage external bleeding.
 - ✓ Perform basic resuscitation procedures using an automatic external defibrillator and other emergency procedures and first aid.
 - ✓ Operate according to the algorithm of advanced resuscitation activities.
 - ✓ Recognize subjective and physical symptoms indicating the abnormal course of pregnancy (abnormal bleeding, contractions of the uterus).
 - ✓ Evaluate the condition of the unconscious patient according to international scoring scales.
 - ✓ Recognise the symptoms of increasing intracranial pressure.
 - ✓ Perform and interpret FAST ultrasound (Focused Assessment with Sonography for Trauma).
 - ✓ Take the informed and legally effective consent: a) for high-risk diagnostic procedures (e.g. gastroscopy, colonoscopy), endoscopic retrograde cholangiopancreatography) b) for high-risk diagnostic procedures (transcutaneous biopsy under control) USG) c) surgery to remove the gallbladder.
 - ✓ To pass on information about the death of a close friend and relative.
 - ✓ Provide family with information on the possibility of organ transplantation of the person who was diagnosed with brain death.
 - ✓ Identify and indicate methods of management of traumatic peripheral nerve damage.
 - ✓ Explain the requirements for emergency and urgent medical care for various injuries, illnesses, and accidents.

Is ready to:

- ✓ Establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures
- ✓ Be guided by the well-being of a patient.
- ✓ Respect medical confidentiality and patients' rights.
- ✓ Take actions towards the patient on the basis of ethical norms and principles, with an awareness of the social determinants and limitations of the disease.
- ✓ Promote health-promoting behaviors.
- ✓ Perceive and recognize own limitations and self-assessing educational deficits and needs.
- ✓ Use objective sources of information.
- ✓ Formulate conclusions from own measurements or observations.
- ✓ Implement the principles of professional camaraderie and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment.
- ✓ Formulate opinions on the various aspects of the professional activity.
- ✓ Assume responsibility for decisions taken in the course of their professional activities, including in terms of the safety of oneself and others.

1.4. Learning outcomes (list of mandatory skills for future practice):

1. Apply the AVPU algorithm for determining the state of consciousness.
2. Apply Glasgow Com scale.
3. Identify the dangerous factors of the place of the accident, the number of victims.
4. Perform SLMR according to existing protocols.
5. Perform primary (ABC) and secondary examination of the patient.
6. Provide emergency medical care in accordance with existing emergency medicine protocols.
7. Master the skills of diagnosing emergency conditions at the scene as part of the emergency medical care team (leader, participant) and the emergency medical care department of a multidisciplinary hospital.

8. To learn to recognize emergency conditions in the work of a doctor of a general practice outpatient clinic - family medicine, polyclinic, hospital department.
9. Master the organizational principles of providing emergency medical care and peacetime emergency situations.
10. Carry out medical triage of the injured.

2. Information volume of the academic discipline.

45 hours 1,5 ECTS credits are allocated to the study of the academic discipline, incl. lectures 4 hours, practical 26 hours, independent work 15 hours. Normative discipline.

Chapter 1. Emergency and urgent medical care

Content section 1 . Emergency and urgent medical care

Topic 1 . "Organization of emergency and emergency medical care in Ukraine. Initial actions of medical workers in the case of an emergency patient".

The concept of a unified system of providing emergency medical care (EMD) in Ukraine. Duties of medical workers. Organization of the EMD service of Ukraine (structure and tasks). The main tasks, functions, rights and responsibilities of medical workers (doctors of the EMD service, general practitioners - family medicine and others) in matters of providing medical assistance to a patient (victim) in an emergency. Ethical, deontological and communicative aspects of EMD. Peculiarities of providing emergency medical care at the pre-hospital stage (EMD team, doctors of general practice outpatient clinics - family medicine, polyclinic), early hospital stage (EMD department of a multidisciplinary hospital) and hospital stage (multidisciplinary departments).

Equipment for the EMD field team (medical products, medicines, special means). Provision of a family doctor's outpatient clinic and multi-specialty departments of the hospital for the provision of EMD. Departure map of the EMD brigade, rules for its registration. Ergonomic principles in the work of the field EMD team (when working indoors, outdoors), team work. Getting to know the EMD station. Safety training.

Personal safety of the employee of the EMD brigade (medical worker) during the provision of emergency medical aid (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. Determination of the mechanism of damage to the victim. The call of the EMD brigade, the arrival time of the EMD machine.

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

Causes, diagnosis and treatment of airway obstruction in adults and childrens. Ensuring the patency of the respiratory tract by the method of throwing the head back with the support of the jaw, reception of Safar. Ensuring the patency of the respiratory tract in case of an injury to the cervical spine (movement of the lower jaw forward). Revision and rehabilitation of the oral cavity by manual and hardware methods. Use of an oropharyngeal (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 a nasopharyngeal (nasopharyngeal) tube. Indications and technique of intubation of the victim. Application of alternative methods of ensuring the patency of the respiratory tract with the help of a laryngeal mask, laryngeal tube, combitube. Symptoms of partial and complete obstruction of the respiratory tract when a foreign body enters, methods of its recovery. Heimlich reception. Indications and technique of conicopuncture and conicotomy. Getting to know the portable ventilator.

Topic 3. " The procedure for providing emergency medical care to the injured and sick at the pre-hospital stage. Primary examination "

Primary examination (ABC). The task of the primary examination. The technology of conducting in a conscious and unconscious patient (stabilization of the head and neck, ensuring patency of the upper respiratory tract, determination of the level of consciousness according to the AVPU scale, assessment of the quality and frequency of breathing, the presence of a central and peripheral pulse, its frequency, body temperature, color and moisture of the skin, capillary filling, control of profuse bleeding). Making a decision on the provision of medical assistance during the initial examination: putting on a cervical collar, giving oxygen, eliminating life-threatening conditions (eliminating mechanical obturation asphyxia, stopping external bleeding, CPR). Determination of further tactics at the scene for the "Load and go" category of patients; those that require a quick head-to-toe examination and those that require a local examination. Criteria for determining the "Load and Go" category of patients. Concept of "platinum" half hour and "golden" hour. The role of the mechanism of damage in determining the patient's severity. Communication of the brigade with the main base, report about the clinical situation.

Assistance and preparation for transporting a patient of the "Load and Go" category. Features of transporting patients and injured (placing on a shield, stretcher, chair stretcher, applying a neck collar, immobilization vest, placing in the interior of the EMD carriage). The technique of removing the victim from the vehicle and transferring it. Means for long-term administration of drugs, indications and application technique. Intraosseous administration of medications.

Topic 4. " The procedure for providing emergency medical aid to the injured and sick at the pre-hospital stage. Secondary examination "

The purpose of the secondary examination. Patients to be quickly examined from head to toe at the scene. Examination technology (initial examination, assessment of the level of consciousness according to the Glasgow scale, examination, palpation of the head, assessment of the condition of the pupils; examination, palpation of the neck; examination, palpation, percussion, auscultation of the chest; examination, palpation of the abdomen; determination of the stability of the pelvic bones; examination, palpation lower and upper limbs, areas of the spine). Additional examination methods (electrocardiogram, pulse oximetry, electrocardiography in 12 standard leads, glucometry). Use of ultrasound in trauma in the prehospital setting and in other (also inhospital) applications, including the FAST, eFAST, BLUE, FEEL protocol, deep veins cannulations, nerve blockades, ect. Determination of the presence of active and passive movements in the limbs, the strength of the muscles of the arms and legs in a conscious patient. Collection of anamnesis (complaints, allergies, medication intake, time of last food intake, previous illnesses, obtaining data on immunization against tetanus, alcohol consumption, finding out the circumstances of the lesion).

Establishing an emergency. Determination of the treatment protocol for emergency medicine.

Criteria for determining patients subject to local examination. Technology of local examination. Establishing a preliminary diagnosis in emergency medicine.

Topic 5 . "Stopping blood circulation and breathing. The technology of providing emergency medical assistance to adults"

Concept of terminal states. Clinical death, its signs. Absolute and relative signs of biological death. Causes of inefficient blood circulation. Diagnosis of sudden death. Classification and assessment of heart rhythm during cardiac arrest. Cardiopulmonary resuscitation technology for ventricular fibrillation, ventricular tachycardia, pulseless electrical activity, asystole in adults according to the 2010 European Resuscitation Council protocol. Diagnosis of causes of cardiac arrest that can be eliminated during resuscitation - four Gs: hypoxia, hypovolemia, hyper/hypokalemia, hypomagnesemia, acidosis, hypothermia; four T: tension pneumothorax, cardiac tamponade, thromboembolism, toxic overdose. Technique of express ECG registration during resuscitation. Defibrillation technique with a manual defibrillator. The technique of pressure on the chest. Pharmacotherapy in cardiac arrest. Technology of cardiopulmonary resuscitation in the presence of an automatic defibrillator. The 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. Legal and ethical aspects of cardiopulmonary resuscitation.

Topic 6 . " Diagnosis and treatment of emergency conditions at the scene "

Diagnosis and treatment at the pre-hospital stage of acute coronary syndrome, cardiogenic shock, hypertensive crisis, anaphylactic shock, hypothermia, drowning, electric shock, coma of unknown etiology, coma in diabetes mellitus, poisoning by an unknown gas, poisoning by an unknown substance in accordance with approved protocols for emergency medicine .

Topic 7. " Emergency medical aid for mechanical injuries"

Diagnosis and treatment at the prehospital stage of mechanical damage to the skull, spine, chest, abdominal organs, pelvis and pelvic organs, limbs. Diagnostics and tactics of the field team for polytrauma, long-term compression and crushing syndrome, external and internal bleeding, traumatic and hemorrhagic shock, hemo- and pneumothorax.

Algorithm for providing emergency medical aid to victims of a traffic accident. Techniques for stopping external bleeding. The technique of transport immobilization of various bone segments at the pre-hospital stage. Puncture of the chest in tense pneumothorax. Occlusive bandage.

Topic 8. "Emergency medical aid for mass injuries"

The procedure of emergency medical aid teams in the focus of mass destruction. Interaction with rescue services, the responsibility of each of them. Organization of the medical triage zone, the medical assistance zone (medical point) and the transport zone (evacuation). Primary medical triage according to the START system. Rules for using sorting bracelets and coupons.

3. THE structure of the academic discipline

No s/p	Topic	Total	l	p.z.	s.r.
1	Organization of emergency and urgent medical care in Ukraine. Initial actions of medical workers in the case of an emergency patient	6	2	2	2
2	Modern means of ensuring airway patency and artificial lung ventilation in adults and childrens	4	-	2	2
3	The procedure for providing emergency medical aid to the injured and sick at the pre-hospital stage. Primary examination	5	-	4	1
4	The procedure for providing emergency medical aid to the injured and sick at the pre-hospital stage. Secondary examination	5	-	4	1
5	Stopping blood circulation and breathing. The technology of providing emergency medical care to adults	8	2	4	2
6	Diagnosis and treatment of emergency conditions at the scene	6	-	4	2
7	Emergency medical care for mechanical injuries	3	-	2	1
8	Emergency medical care for mass injuries	4	-	2	2
9	Final modular control	4	-	2	2
	Hours together	45	4	26	15

4. Thematic plan of lectures

No s/p	Topic	Number of hours
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1.	Organization of emergency and urgent medical care in Ukraine. Initial actions of medical workers in the case of an emergency patient	2
2.	Stopping blood circulation and breathing. The technology of providing emergency medical care to adults and childrens	2
In this :		4

5. Thematic plan of practical classes

No zp	Practical training	Number hours
1	Initial actions of medical workers in the case of an emergency patient	2
2	Modern means of ensuring airway patency and artificial lung ventilation in adults and childrens	2
3	The procedure for providing emergency medical aid to the injured and sick at the pre-hospital stage. Primary examination	4
4	The procedure for providing emergency medical aid to the injured and sick at the pre-hospital stage. Secondary examination	4
5	Stopping blood circulation and breathing. The technology of providing emergency medical care to adults	4
6	Diagnosis and treatment of emergency conditions at the scene	4
7	Emergency medical care for mechanical injuries	2
8	Emergency medical care for mass injuries	2
9	Final modular control: differential calculation	2
In this :		26

6. Thematic plan of students ' independent work

No. z/p	Topic	Number of hours
1.	Initial actions of medical workers in the case of an emergency patient	2
2.	Modern means of ensuring airway patency and artificial lung ventilation in adults	2
3.	The procedure for providing emergency medical aid to the injured and sick at the pre-hospital stage. Primary examination	1
4.	The procedure for providing emergency medical aid to the injured and sick at the pre-hospital stage. Secondary examination	1
5.	Stopping blood circulation and breathing. The technology of providing emergency medical care to adults	2
6.	Diagnosis and treatment of emergency conditions at the scene	2
7.	Emergency medical care for mechanical injuries	1
8.	Emergency medical care for mass injuries	2
9.	Preparation for the final control	2
In this :		15

7. A list of theoretical questions for preparing students for the final examination

1. Organization of emergency medical services of Ukraine (legal and 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) medical team.
4. List of equipment and personal safety equipment of the emergency (ambulance) medical team.
5. Organizational structure, main tasks, functions and equipment of the emergency (urgent) medical care department 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 personal safety of medical personnel, safety of witnesses of the event and the victim, approach to the victim (patient).
8. Ergonomic principles in the work of the field EMD team (when working indoors, outdoors), teamwork.
9. Primary review (ABC). The task of the initial review. Technology of conducting in a conscious and unconscious patient.
10. Provision of medical assistance during the initial examination. Determination of further tactics at the scene.
11. The task of secondary review. Indications for secondary inspection at the scene and on the evacuation route. Technology of secondary (ABCDE) examination of the victim (patient).
12. Pathogenesis, clinic, diagnosis and treatment of airway obstruction in patients of different age groups.
13. Ensuring the patency of the respiratory tract by throwing the head back or withdrawing the lower jaw (protruding forward). Safar's triple reception.
14. Ensuring patency of the respiratory tract in case of cervical spine injury.
15. Inspection and cleaning of the oral cavity by manual and hardware methods.
16. Use of an 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. Application of alternative methods of ensuring patency of the respiratory tract using a laryngeal mask, laryngeal tube, combitube.
20. Symptoms of partial and complete obstruction of the respiratory tract when a foreign body hits, methods of its recovery. Heimlich reception.
21. Indications and technique of conicopuncture and conicotomy.
22. 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 rhythm during cardiac arrest.
25. Technology of cardiopulmonary resuscitation with ventricular fibrillation in adults and childrens.
26. Technology of cardiopulmonary resuscitation for ventricular tachycardia in adults and childrens.
27. Technology of cardiopulmonary resuscitation with pulseless electrical activity in adults and childrens.
28. Technology of cardiopulmonary resuscitation in asystole in adults and childrens.
29. Diagnosis of the causes of cardiac arrest that can be eliminated during resuscitation - four " Gs " : hypoxia, hypovolemia, hyper/hypokalemia, hypomagnesemia, acidosis, hypothermia; four T 's : tension pneumothorax, cardiac tamponade, thromboembolism, toxic overdose .
30. Pharmacotherapy in 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. Diagnostics and emergency medical care for cardiogenic shock.
38. Diagnosis and emergency medical care in hypertensive crisis.
39. Diagnostics and emergency medical care for anaphylactic shock.
40. Diagnosis and emergency medical care for hypothermia.
41. Diagnosis and emergency medical assistance in case of drowning.
42. Diagnostics 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. Diagnostics and emergency medical care for poisoning with an unknown gas.
46. Diagnosis and emergency medical care in case of poisoning by an unknown substance.
47. Diagnosis and emergency medical care for mechanical damage to the skull.
48. Diagnostics and emergency medical care for mechanical damage to the spine.
49. Diagnostics and emergency medical care for mechanical damage to the chest.
50. Diagnostics and emergency medical care for mechanical damage to the organs of the abdominal cavity, pelvis and pelvic organs.
51. Diagnostics and emergency medical care for mechanical damage to limbs.
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. Diagnostics and emergency medical care for traumatic shock.
56. Diagnosis and emergency medical care for hemorrhagic shock.
57. Diagnostics and emergency medical care for hemo- and pneumothorax.
58. Algorithm of actions of the emergency medical aid team in the event of a traffic accident.
59. General principles of detoxification therapy at the pre-hospital stage. Antidote therapy.
60. The procedure of emergency medical aid teams in a safe focus of mass destruction.
61. Primary medical triage according to the START system.
62. Rules for using sorting bracelets and coupons.
63. The concept of brigades of constant readiness of the first line, specialized brigades of constant readiness of the second line, mobile field brigades, their formation and tasks.
64. The role of emergency medical care departments of multidisciplinary hospitals in optimizing the provision of medical care for mass injuries.

List of practical skills for final control

1. Apply the AVPU algorithm for determining the state of consciousness.
2. Apply Glasgow Com scale.
3. Identify the dangerous factors of the place of the accident, the number of victims.
4. Perform SLMR according to existing protocols.
5. Perform primary (ABC) and secondary examination of the patient.
6. Provide emergency medical care in accordance with existing emergency medicine protocols.
7. Master the skills of diagnosing emergency conditions at the scene as part of the emergency medical care team (leader, participant) and the emergency medical care department of a multidisciplinary hospital.
8. To learn to recognize emergency conditions in the work of a doctor of a general practice outpatient clinic - family medicine, polyclinic, hospital department.
9. Master the organizational principles of providing emergency medical care and peacetime emergency situations.
10. Carry out medical triage of the injured.

8. Teaching methods

1. **Verbal** (lecture, explanation, story, conversation, instruction);
2. **Visual** (observation, illustration, demonstration);
3. **Practical** (various types of exercises, performing graphic works, carrying out an experiment, practice).

The following teaching methods are also used during the educational process:

- **explanatory-illustrative or information-receptive**, which involves the presentation of ready-made information by the teacher and its assimilation by students;
 - verbal methods: the source of knowledge is the spoken or printed word (story, conversation, instruction, etc.)
 - practical methods: students acquire knowledge and skills by performing practical actions (exercise, training, self-management).
- **reproductive**, (reproduction - reproduction) which is based on the performance of various tasks according to the model;
- **method of problem presentation**, which consisted in the fact that the teacher poses a problem and solves it himself, demonstrating the contradictions that characterize the learning process, while the students' task is to control the sequence of presentation of the material, the significance of the evidence, predicting the teacher's next steps; this MN is implemented by training students in problem situations with the aim of successful preliminary preparation for future work in real conditions of practical medical institutions;
- **partially search or heuristic**, aimed at mastering individual elements of search activity, for example: the teacher formulates a problem, students - a hypothesis;
- **research**, the essence of which is the teacher's organization of creative research activities of students by posing new problems and problematic tasks.
- methods that ensure **perception and assimilation** of knowledge by students (lectures, independent work, instruction, consultation);
- **methods of applying knowledge and acquiring and consolidating abilities and skills** (practical classes, control tasks);
- **methods of checking and evaluating knowledge, abilities and skills**;
- **visual methods**: the source of knowledge is observed objects, phenomena, visual examples
- **discussion methods**.

9. Control methods

9.1. Current control is carried out on the basis of control of theoretical knowledge, skills and abilities in practical classes. The student's independent work is evaluated in practical classes and is a component of the student's final grade. Current control is carried out during training sessions and is aimed at checking students' assimilation of educational material. Forms of current control are:

- a) test tasks with the choice of one correct answer, with the definition of the correct sequence of actions, with the definition of correspondence;
- b) individual oral survey, interview;
- c) solving typical situational problems;
- d) control of practical skills.

9.2. The form of the final control of study success

is conducted at the last control session in the form of a diff. assessment (test tasks on the computer)

Students who have attended all the classroom training sessions provided by the curriculum for the discipline and have scored at least the minimum number of points (**72 points**) are admitted to

PC. A student who, for good or no good reasons, missed classes, is allowed to work off the academic debt by a certain specified period.

Forms of final control should be standardized and include control of theoretical and practical training.

10. Scheme of accrual and distribution of points received by students of higher education.

Evaluation of current educational activities . During the assessment of mastery of each topic for the current educational activity, the student is given grades on a 4-point (national) grading scale. At the same time, all types of work provided for by the discipline program are taken into account. The student must receive a grade in each topic. Estimates given on a traditional scale are converted into points. The final grade for the current educational activity is recognized as an arithmetic average (the sum of grades for each class is divided by the number of classes in the semester) and is converted into points according to **Table 1**.

Table 1. Recalculation of the average grade for the current activity into a multi-point scale (for disciplines ending with a differential credit)

4-point scale	120-point scale	4-point scale	120-point scale	4-point scale	120-point scale	4-point scale	120-point scale
5	120	4.45	107	3.91	94	3.37	81
4.95	119	4.41	106	3.87	93	3.33	80
4.91	118	4.37	105	3.83	92	3.29	79
4.87	117	4.33	104	3.79	91	3.25	78
4.83	116	4.29	103	3.74	90	3.2	77
4.79	115	4.25	102	3.7	89	3.16	76
4.75	114	4.2	101	3.66	88	3.12	75
4.7	113	4.16	100	3.62	87	3.08	74
4.66	112	4.12	99	3.58	86	3.04	73
4.62	111	4.08	98	3.54	85	3	72
4.58	110	4.04	97	3.49	84	Less than 3	Not enough
4.54	109	3.99	96	3.45	83		
4.5	108	3.95	95	3.41	82		

The maximum number of points that a student can score for the current educational activity for admission to the diff. credit is 120 points.

The minimum number of points that a student must score for the current educational activity for admission to the diff. the credit is 72 points. The calculation of the number of points is carried out on the basis of the grades received by the student on a 4-point (national) scale during the study of the discipline, by calculating the arithmetic mean (CA), rounded to two decimal places.

Assessment of individual student tasks . Points for individual tasks are awarded only under conditions of their successful completion and defense. The number of points awarded for different types of individual tasks depends on their volume and importance, but no more than 10-12 points. They are added to the sum of points scored by the student in classes during the current educational activity. In no case can the total amount for the current activity exceed 120 points.

Assessment of students' independent work . Students' independent work, which is provided for by the topic of the lesson along with classroom work, is evaluated during the current control of the topic in the corresponding lesson. The mastery of topics that are assigned only to independent work is checked during the final control .

The maximum number of points that a student can score while taking the diff. credit is **80 points**

The evaluation of the final control is considered passed if the student scored at least 60% of the maximum number of points (for a 200-point scale – at least 50 points) .

Determining the number of points that the student scored in the discipline : the number of points that the student scored in the discipline is determined as the sum of points for the current educational activity and for the final control (dif. credit).

Conversion of the number of points from the discipline into grades on the ECTS scale and on the four-point (traditional) scale

Subject scores are independently converted to both the ECTS scale and the national grading scale, but not vice versa . **Table 2.**

Criteria for setting the assessment according to the traditional 4-point and ECTS scale for taking the exam :

Score in points	Rating by national scale	Rating according to the ECTS scale
180-200	Perfectly	A
160 -179	Fine	B
150-159		C
130 -149	Satisfactorily	D
120 -129		E
50 - 119	Unsatisfactorily	FX
0-49		F

Evaluation criteria.

During the evaluation of the mastery of each topic for the current educational activity, the higher education applicant is given grades according to the national (traditional) scale, taking into account the approved evaluation criteria:

- *grade "excellent" (5)* - the student flawlessly mastered the theoretical material of the topic of the lesson, demonstrates deep and comprehensive knowledge of the relevant topic, the main provisions of scientific primary sources and recommended literature, thinks logically and constructs an answer, freely uses the acquired theoretical knowledge when analyzing practical material, expresses his attitude to certain problems, demonstrates a high level of assimilation of practical skills;
- *grade "good" (4)* - the student has mastered the theoretical material of the lesson well, has the main aspects from primary sources and recommended literature, presents it with arguments; possesses practical skills, expresses his thoughts on certain problems, but certain inaccuracies and errors are assumed in the logic of the presentation of theoretical content or in the performance of practical skills;
- *rating "satisfactory" (3)* - the student has basically mastered the theoretical knowledge of the subject, orients himself in primary sources and recommended literature, but answers unconvincingly, confuses concepts, additional questions cause the student uncertainty or lack of stable knowledge; when answering questions of a practical nature, reveals inaccuracies in knowledge, does not know how to evaluate facts and phenomena, connect them with future activities, makes mistakes when performing practical skills;
- *rating "unsatisfactory" (2)* - the student has not mastered the educational material of the topic, does not know scientific facts, definitions, hardly orients himself in primary sources and recommended literature, lacks scientific thinking, practical skills are not formed.

Estimates given on a traditional scale are converted into points. The minimum number of points that a student must score for the current academic activity per semester for admission to the exam is 120 points.

1. Working curriculum in the discipline.
2. Calendar and thematic plans of lectures and practical classes.
3. Sample test tasks for classes.
4. Test tasks for credit.
5. Educational and visual aids, technical teaching aids, etc.
6. Outlines of lectures on the discipline.
7. Computer tests for each topic and on PMK to determine residual knowledge of the discipline.
8. Individual tasks for students within the curriculum.
9. Control questions for classes.
10. Questions to PMK.
11. Methodical materials that ensure independent work of students.
12. Computer slides by topic.
13. Other materials (posters, albums, etc.).

Individual tasks

1. The concept of emergency medical care.
2. The concept of resuscitation.
3. Terminal states: pre-agony, terminal pause, agony.
4. Signs of biological death.
5. Concept of clinical death.
6. Resuscitation: procedure.
7. Precardial stroke.
8. Indirect heart massage.
9. Methods of artificial respiration.
10. Peculiarities of resuscitation for children.
11. Foreign bodies in the respiratory tract, emergency medical care.
12. Polytrauma, emergency medical care.
13. Prolonged squeezing syndrome, emergency medical care.
14. Detachment of a limb segment, emergency medical care.
15. Collapse, emergency medical care.
16. Traumatic shock, emergency medical care.
17. Thermal burns, emergency medical care.
18. Epileptic seizure, emergency medical care.
19. Lightning strike, emergency medical care.
20. Heatstroke, emergency medical care.
21. Frostbite, emergency medical assistance.
22. Dislocations emergency medical care.
23. Pneumothorax, emergency medical care.
24. Fractures, emergency medical care.
25. Wounds, emergency medical care.
26. Drowning emergency medical care.
27. Electric injuries, emergency medical care.
28. Organization of emergency medical care for victims of an emergency.
29. Organization of training of employees of the hospital on emergency medical care.
30. Organization of training of the personnel of the relevant formations of the Central Committee on issues of emergency medical care.
31. Conducting rescue and emergency work at facilities. Providing emergency medical care.

1 2 . Recommended Books

1. Basic literature

1. E. Shved, A.A. Gudyma, S.M. Geryak et al. Emergency medical care: manual - Ternopil: TDMU, 2016 - 448 p.

2. Supporting literature

1. Avrutsky G.Ya., Balabolkin M.I., Barkachan E.S. etc. Directory of emergency and emergency medical care. – Rostov-on-Don: Phoenix, 2005. – Volume 1. – 576 p.; Volume 2. - 575 p.
2. Algorithm of emergency medical care for emergency conditions at the pre-hospital stage. Luhansk, 2000.
3. Bunyatyan A.A. Handbook of resuscitation and anesthesiology. - M.: Medicine, 2006. 272 p.
4. Handbook of medical care at the pre-hospital stage (edited by I. S. Zozuli). Kyiv, "Health", 2004.
5. Kovalchuk L.Ya., Hnativ VV, Beh M.D and others. Anesthesiology, resuscitation and intensive care of emergency conditions. – Ternopil: Ukrmedknyga, 2003. – 324 p.
6. Moskalenko V.F., Roschin H.G., Natsyuk M.V. and others. Standards for providing emergency medical care at the pre-hospital stage according to protocols. In the book: Problems of military health care. Kyiv, 2005, p. 293 – 297
7. Safar P. Cardiopulmonary resuscitation / Trans. with English - M.: Medicine, 2004.

3. Information resources:

1. Library of the Academy.
2. Internet.
3. Educational and methodical materials on the discipline at the department.
4. Consultations of the teacher regarding the use of educational and methodical materials and recommended literature.

"APPROVED"



B.o. Пекропа /Acting Rector

Dmytro GOVSIEIEV