Ministry of Health of Ukraine
Poltava State Medical University

Department of Anaesthesiology and Intensive Care

«AGREED**»**
Guarantor of the educational program in specialty of "Medicine"

_____I. SKRYPNYK

“_____”_____20___ year

«APPROVED»
Head of the academic council of the Education and Science Medical Institute

_____Yu. KAZAKOV

Protocol from _____2024 №__

SYLABUS

EMERGENCY MEDICAL CARE

Normative discipline

(normative/selective discipline)

educational and professional level	second (master) level of higher education
field of knowledge	22 «Healthcare»
specialty	222 «Medicine»
educational qualification	Master of Medicine
professional qualifications	doctor
educational and professional program	222 «Medicine»
form of training	daytime
Course and semester of study	5 course, IX semester

«APPROVED»
at a meeting of the Department of Anaesthesiology and Intensive Care

Head of the Dept _____ K. Tarasenko

Protocol from _____2024 р № ___

Poltava – 2024

DATA ON TEACHERS WHO TEACH THE EDUCATIONAL DISCIPLINE

Surname, name, patronymic of the teacher (s), academic degree, academic rank	Ass. Telegan Vladislav Ass. Davydenko Alina Ass. Adamchuk Nataliia
Teacher (s) profile	https://www.umsa.edu.ua/fakultets/med/kafedry/anestz/workers
Contact number	Head of the Department, MD Kostiantyn Tarasenko +380999496745
E-mail:	anesthpoltava@gmail.com
Department page on the PSMU website	https://www.umsa.edu.ua/fakultets/med/kafedry/anestz

BASIC CHARACTERISTICS OF EDUCATIONAL DISCIPLINE

The volume of discipline

The number of credits / hours – 3,0/90, of which:

Lectures (hours) - 4

Practical (seminars) (hours) - 26

Independent work (hours). - 60

Type of control - Final modular control

Signs of academic discipline

The nature of the discipline (normative / selective) normative

Year of study – 5

IX semester

Discipline Policy

The policy of the discipline is based on the principles of academic integrity and is determined by the system of requirements that the teacher imposes on the student when studying the discipline (rules of conduct in class, passes, use of mobile phones, retransmissions, etc.).

Applicants for higher education must adhere to educational and academic ethics and the schedule of the educational process; to be balanced, attentive.

Requirements may relate to attendance (inadmissibility of absences, delays, etc.); rules of conduct in the classroom (active participation, fulfillment of the required minimum of educational work, disconnection of telephones, etc.);

Preparation and participation in practical classes includes: acquaintance with the curriculum and plans of practical classes; study of theoretical material; performance of tasks proposed for self-study.

The applicant's response should show signs of independence of the tasks, the absence of signs of recurrence and plagiarism.

The presence of higher education students in practical classes is mandatory. Classes missed for good reasons must be completed. Attendance at lectures is a mandatory component of the study of the material; at the lecture it is forbidden to distract the teacher from teaching the material, all questions, clarifications, etc. students ask at the end of the lecture in the allotted time;

Works that are submitted in violation of deadlines without good reason are evaluated at a lower score (75% of the possible maximum number of points for the type of activity points). Rearrangement of modules occurs in the presence of valid reasons (for example, hospital).

Academic Integrity Policy.

Adherence to academic integrity by students provides:

- independent performance of educational tasks, tasks of current and final control of learning outcomes;
- links to sources of information in case of use of abstracts, reports, Use of prohibited auxiliary materials or technical means during control measures (cheat sheets, abstracts, headphones, phones, smartphones, tablets, etc.);
- write-offs during control works are forbidden (including with use of mobile devices).

Mobile devices are allowed to be used only during online testing and preparation of practical tasks during the lesson. For violation of academic integrity, students may be held subject to the following academic liability: re-assessment (test, exam, test, etc.);

When organizing the educational process in PSMU teachers and students act in accordance with:

- Regulations on the organization of the educational process in the Poltava State Medical University.
- Regulations on the academic integrity of higher education seekers and employees of the Poltava State Medical University.
- Rules of procedure for students of the Ukrainian Poltava State Medical University.
- Regulations on the organization and methods of assessment of educational activities of higher education in the Poltava State Medical University.
- Regulations on the organization of independent work of students at the Poltava State Medical University.
- Regulations on working off missed classes and unsatisfactory grades by applicants for higher education of the Poltava State Medical University.
- Regulations on the procedure for forming individual educational trajectories by PSMU students.
- Regulations on the procedure for re-enrollment of academic disciplines and determination of academic difference.
- Regulations on the appeal of the results of the final control of knowledge of applicants for higher education.
- Regulations on the rating of applicants for higher education of the Poltava State Medical University.
- Regulations on financial incentives for academic success of students of the Poltava State Medical University.

The above provisions can be found at: (https://www.umsa.edu.ua/n-process/department-npr/normativni-dokumenti)

Description of the discipline (abstract)

Emergency medical care (EMC) is a clinical, practically-oriented normative discipline, in the study of which students develop professional skills in the organization of urgent medical actions, The Office of the United Nations High Commissioner for Human Rights and the Office of the United Nations High Commissioner for Human Rights have established a National Human Rights Commission on Human Rights. Professional skills with EMC are formed by assimilation of theoretical knowledge and practical skills in organizing the provision of EMC , the strategy and tactics of the medical worker at the prehospital stage, the organization of medical care for mass lesions, the technology of universal therapeutic actions at the prehospital stage, cardiopulmonary and cerebral resuscitation (CPCR), EMC in acute disorders of cerebral homeostasis, respiration, hemodynamics, the effects of aggressive environmental factors, m mechanical injuries and the like. The acquisition of material is accompanied by the acquisition of relevant integral, general and professional competences.

The program of discipline is presented with 1 module ««Emergency and emergency medical care» and does not provide for the informative modules.

The educational process is organized according to the principles of the European Credit and Transfer System.

Pre-requisition and postpection of the subject (interdisciplinary linkages)

Pre-requisition. The study of EMC is based on the knowledge acquired by students in such fundamental disciplines as anatomy, histology, physiology, pathological anatomy, pathological physiology, clinical anatomy and operational surgery; Pharmacology, prophylaxis of internal medicine, pediatrics, general surgery, neurology, and lays the foundations for the study of clinical surgery, internal medicine, paediatrics, traumatology and orthopedics, neurosurgery and other educational disciplines dealing with diseases aggravated by acute life-support disorders.

Postpection. The study of EMC lays the foundations for the study of clinical surgery, internal medicine, paediatrics, traumatology and orthopedics, neurosurgery and other educational disciplines dealing with diseases, with acute disabilities of life-support functions.

Aim and objectives of the discipline:

- The aim of studying EMC are:

- training of students in systematized knowledge of the organization of EMC;
- mastery of the strategy and tactics of the actions of the medical worker at the prehospital stage;
- the formation of the ability to organize medical care for mass lesions;
- acquisition of skills in diagnosing a critical condition, organizing and conducting cardiopulmonary resuscitation;
- the formation of the ability to diagnose emergency conditions by assessing the patient's condition:

• the formation of the ability to make an informed decision on the tactics of emergency medical care;
• mastery of skills in the technology of providing EMC in acute violations of life support functions.

- The main tasks of studying the discipline are:
  • determine the basic principles of organizing and providing EMC;
  • master the principles of providing EMC in case of emergency in peacetime;
  • to study the sequence of actions of emergency medical care teams in case of mass lesions;
  • learn how to conduct medical sorting of victims;
  • learn to recognize emergency conditions in the work of a doctor, regardless of his profile;
  • master the skills of diagnosing emergency conditions at the scene of an accident as part of the team;
  • learn to choose a medical protocol for emergency medicine, which is most consistent with the symptoms of the victim (patient);
  • provide EMC in accordance with a specific protocol on emergency medicine with adequate manipulations;
  • master the skills of evacuating victims from the affected area;
  • master the skills of transporting patients (victims) to a medical institution.

Competencies and learning outcomes promoted by discipline (integral, general, special, matrix of competencies)

integral: the ability to solve typical and complex specialized problems and practical problems in professional activities in the field of healthcare or in the learning process, provides for research and / or innovation and is characterized by the complexity and uncertainty of conditions and requirements;

general:

1. the ability to abstract thinking, analysis and synthesis;
2. the ability to learn and master modern knowledge;
3. the ability to apply knowledge in practical situations;
4. the ability to plan and manage time;
5. knowledge and understanding of the subject area and understanding of professional activity;
6. skills in the use of information and communication technologies;
7. the ability to adapt and act in a new situation;
8. the ability to make informed decisions;
9. the ability to work in a team;
10. interpersonal interaction skills;
11. certainty and perseverance on the tasks and responsibilities;
12. the desire to preserve the environment;
13. the ability to act on the basis of ethical considerations (motives)

special (professional, subject):

1. Organization of the work of the EMC team;
2. Strategy and tactics of actions of a medical worker at the prehospital stage;
3. Organization of medical care for mass lesions;
4. The technology of universal therapeutic actions at the prehospital stage;
5. Cardiopulmonary and cerebral resuscitation;
6. EMC in acute disorders of life support systems: cerebral disorders, respiratory disorders, hemodynamics, the effects of aggressive environmental factors, mechanical injuries.

Learning outcomes for the discipline:

Upon completion of the study, students must

know:

1. Organization of EMC systems in Ukraine and the world;
2. The strategic concept of "platinum" half hour and "golden" hour.
3. The goals and objectives of the primary and secondary examinations;
4. Tactical principles of "boot and drive" and "Stop-and-treat";
5. The order of action of brigades EMC in the focus of mass destruction.
6. Definition, mechanisms and diagnostics of terminal conditions.
7. Stages and for step CPR P. Safar.
8. The essence of the medical action program of the European Resuscitation Council (ERP): BLS, ILS, ALS, EPBLS, EPILS, EPALS, NLS ETC. Algorithm of actions "Basic life support" (BLS and EPBLS)
9. The algorithm of actions "Immediate life support» (ILS, ERILS)
10. The algorithm of actions "Extended life support » (ALS, EPALS)
11. Organizational and diagnostic measures to end the SLCR;
12. Technology for providing EMC in acute cerebral disorders: coma of an unclear etiology of insects associated with glucose and insulin metabolism, convulsions, acute mental disorders, mental disorders, suspected stroke / transient ischemic attack;
13. The technology for providing EMC in acute respiratory disorders: ensuring control of the respiratory tract, complete and partial obstruction of the respiratory tract by a foreign body, laryngeal edema, drowning, bronchial obstructive syndrome, pulmonary edema,
14. Technology for providing EMC in acute hemodynamic disorders: fainting and pre-syncope, chest pain / acute coronary syndrome, brady and tachycardia, cardiogenic shock, hypertensive crisis, anaphylactic shock;
15. Technology for the provision of EMC when exposed to aggressive environmental factors: sun, heat stroke, hypothermia, frostbite, thermal, chemical burns and burn shock, natural and artificial electric shock, radiation damage, bites and stings by animals and plants, acute poisoning;
16. Technology for providing EMC for mechanical injuries: injuries to the skull, spine, chest, abdominal organs, pelvis and pelvic organs, limbs, polytrauma, prolonged compression and crushing syndrome, external and internal bleeding, traumatic and hemorrhagic shock, hemo- and pneumothorax;

be able to:

1. To organize work in a team for the provision of EMC;

2. Assess the situation and identify hazards;
3. Conduct medical trials according to the START system;
4. Evacuate the victim from the vehicle, including using Rautek's techniques;
5. Remove the helmet from the motorcyclist;
6. Use the techniques of transferring, fixing and transporting the patient and the victim;
7. Collect anamnesis according to the schemes "OPQRST" and "SAMPLE";
8. Conduct an initial examination of the patient / victim;
9. Conduct a second examination of the patient / victim;
10. Establish the leading syndrome and choose the appropriate treatment protocol for EMC;
11. To carry out an audit and rehabilitation of the oral cavity by manual and hardware methods;
12. To restore airway patency (Safar techniques, airway, laryngeal mask, combi tub, tracheal intubation);
13. Organize oxygen and respiratory therapy (by elementary methods, manual and automatic respirators);
14. Perform manual and hardware compression for indirect heart massage;
15.Perform the reception of Heimlich;
16. Conduct emergency conicotomy;
17. To establish peripheral intravenous administration of drugs;
18. To establish intraosseous administration of drugs.
19. Conduct a basic, immediate and expanded complexes of cardiopulmonary resuscitation;
20. Use an electric defibrillator (automatic external and manual);
21. Assess capillary filling;
22. To evaluate the level of consciousness on the scales of AVPU, Glasgow, FOUR);
23. Conduct screening diagnosis of stroke / transient ischemic attack on the BEFAST scale;
24. Register a 12-channel ECG;
25. Apply a styptic tourniquet;
26. Wear a cervical collar;
27. Apply a transport tire;
28. To carry out immobilization in case of spinal injury;
29. Measure and interpret the value of blood pressure
30. Apply an occlusive valve dressing with open and intense pneumothorax;
31. Drain the pleural cavity with intense pneumothorax;
32. Perform pulse oximetry;
33. Perform an analysis of blood glucose;
34. Perform capnography.

Thematic plan of lectures (in modules) with the main issues discussed at the lectures

№	The name of the topic	Number of hours
	Module 1. "Emergency and urgent medical care"	
1.	**Topic 1. Organization of emergency and urgent medical care** Organization of emergency and urgent medical care in Ukraine. Strategy and tactics of medical worker actions in the prehospital phase. The technology of universal medical action prehospitalOrganization of emergency and urgent medical care.	2
2.	**Topic 2. Cardiopulmonary and cerebral resuscitation** Diagnosis of clinical death. CPCR algorithm in adults and children. The concept of the "chain of life." Activities of basic life support (BLS): chest compression, triple Safar, artificial respiration, automatic external defibrillation. Methods of Specialized Life Support (ACLS): diagnosis of heart rhythm disturbances, defibrillation, airway protection, and the use of drugs during CPCR.	2
	Total	4

Thematic plan of seminars for modules and content modules, indicating the main issues addressed at the seminar

Not provided.

Thematic plan of practical classes by modules and content modules, indicating the main issues addressed in the practical training

№	The name of the topic	Number of hours
	Module 1. "Emergency and urgent medical care"	
1.	**Topic 1. Organization of emergency and urgent medical care.** Comparative characteristics of organizational systems for providing EMC in different countries. Organization of the EMC service of Ukraine (structure and objectives). The main tasks, functions, rights and responsibilities of medical workers (doctors of the EMC service, general practitioners - family medicine and others) regarding the provision of medical care to a patient (victim) in an emergency. Ethical, deontological and communicative aspects of EMC. Equipment of the EMC visiting team (medical devices, medicines, special means). EMC team call, time of arrival of the EMC machine. EMC team exit map, rules for its design. Communication team with the main base, a report on the clinical situation. Ergonomic principles in the work of the EMC visiting team (when working indoors, outdoors), teamwork. Continuity of patient management at different	2

	stages of provision in the provision of EMC.	
2.	**Topic 2. Strategy and tactics of actions of the medical worker at the pre-hospital stage.** Strategic concepts of "platinum" half an hour and "golden" hour. Initial examination: purpose, technology of PDABCDE (assessment of the need to protect personnel from possible injuries, consciousness on the AVPU scale, airway patency, frequency and efficiency of respiration, blood circulation, decision on the feasibility of resuscitation, protection of the patient from environmental factors). The choice of tactics at the scene on the principles: "Load and ride" or "Stop and treat". Secondary examination: purpose, collection of anamnesis according to the schemes "OPQRST" and "SAMPLE", rapid examination on the principle of "Head to toe", the possibility of additional examinations at the pre-hospital stage and indications for their use.	2
3.	**Topic 3. Organization of medical assistance for mass lesions.** 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.	2
4.	**Topic 4. Technology of universal therapeutic actions at the pre-hospital stage** Evacuation of the victim from the vehicle, Rautek's receptions, removal of the helmet from the rider, transfer, fixing and transport of the patient and the victim, manual and machine-readjustment and repair of the oral cavity (Safara, air duct, laryngeal mask, comb-gear, trachea intubation), oxygen and respiratory therapy (elementary methods, manual and automatic respirators), manual and hardware compression techniques for indirect heart massage, injectables and intraosseous medications.	2
5.	**Topic 5. Cardiopulmonary and cerebral resuscitation: Stage I.** Terminal states. Signs of clinical death. Causes of circulatory arrest. Stages and for step CPCR P. Safar. European Resuscitation Council (ERC) ERC medical programs: BLS, ILS, ALS, EPBLS, EPILS, EPALS, NLS ETC. And the (immediate) phase of the CPCR. Basic life support (BLS and EPBLS): technology, features of CPR depending on the cause of clinical death and patient age. Assessment of the effectiveness of resuscitation measures.	2
6.	**Topic 6. Cardiopulmonary and cerebral resuscitation: stages II and III.** Types of cardiac arrest. Immediate life support (ILS, EPILS): technology, ECG diagnostics such as circulatory arrest, defibrillation (types, indications, safety). Extended life support (ALS, EPALS): tactics, diagnosis and treatment of potentially reversible causes of circulatory arrest on the principle of "4G; 4T ", the use of additional diagnostic methods, the scope and justification of drug therapy during resuscitation. Teamwork. Measures to restore brain	2

	function. Criteria for termination of resuscitation. Signs of biological death.	
7.	**Topic 7. Emergency and urgent medical care for acute cerebral disorders.** Types and gradations of acute disorders of consciousness. Scale of evaluation of consciousness (Glasgow, FOUR). Coma: The definition, degree, cause, tactics of the coma patient's vague etiology. Therapeutic and diagnostic tactics in comas related to glucose and insulin metabolism (hyperglycemic, hyperlactatemic, hyperosmolar, hypoglycemic). Cramping: causes, types, patient management tactics. Management tactics for patients with acute mental disorders: patient arousal or aggression, mental disorder. Suspected stroke / transient ischemic attack: definition, diagnostic criteria, BEFAST rating, diagnostic treatment and transport organization.	2
8.	**Topic 8. Emergency and urgent medical care in acute respiratory disorders** Control of the airway. Therapeutic-diagnostic tactics with complete and partial perforation of the respiratory tracts with a foreign body, larynx edema, technique of execution of Heimlich's reception, conikotomy. Drowning: types, mechanisms, clinic, features of provision of EMC. Therapeutic and diagnostic tactics for bronchoobstructive syndrome, pulmonary edema.	2
9.	**Topic 9. Emergency and urgent medical care for acute hemodynamic disorders.** Diagnostic, therapeutic and organizational tactics in syncope and presincopal condition, chest pain / acute coronary syndrome, brady and tachycardia, cardiogenic shock, hypertensive crisis, anaphylactic shock.	2
10.	**Topic 10. Emergency and urgent medical care for aggressive environmental factors** Diagnostic, therapeutic and organizational tactics in cases of solar, heat shock, hypothermia, freezing, thermal, chemical and burn shock, natural and artificial electrical shocks, radiation damage, bites and stings by animals and plants. General toxicology: determination of the poison, pathways of entry, metabolic phases of poisoning, general therapy of acute exogenous poisoning.	2
11.	**Topic 11. Emergency and urgent medical care for mechanical injuries.** Diagnosis and treatment at the pre-hospital stage of mechanical damage to the skull, spine, thorax, abdominal, pelvic and pelvic organs, and limbs. Diagnostics and tactics of the mobile brigade in case of poltrauma, prolonged compression and crushing syndrome, external and internal bleeding, traumatic and haemorrhagic shock, haemo and pneumothorax. Algorithm for providing emergency medical assistance to victims in the accident. Techniques for stopping external bleeding. Technique of transport immobilization of various bone segments in the pre-hospital stage. Thoracic puncture under severe pneumothorax. Occlusion bandage.	2
12.	FINAL MODULAR CONTROL	4
	TOTAL	26

Thematic plan for self-learning modules and semantic modules indicating the main issues

№	The name of the topic	Number of hours
	Module 1. "Emergency and urgent medical care"	
1.	**Preparation for practical classes – theoretical preparation and development of practical skills**	11
2.	**Topic 1. Cardiopulmonary and cerebral resuscitation: Stage I.** Terminal states. Signs of clinical death. Causes of circulatory arrest. Stages and for step CPCR P. Safar. European Resuscitation Council (ERC) ERC medical programs: BLS, ILS, ALS, EPBLS, EPILS, EPALS, NLS ETC. And the (immediate) phase of the CPCR. Basic life support (BLS and EPBLS): technology, features of CPR depending on the cause of clinical death and patient age. Assessment of the effectiveness of resuscitation measures.	10
3.	**Topic 2. Cardiopulmonary and cerebral resuscitation: stages II and III.** Types of cardiac arrest. Immediate life support (ILS, EPILS): technology, ECG diagnostics such as circulatory arrest, defibrillation (types, indications, safety). Extended life support (ALS, EPALS): tactics, diagnosis and treatment of potentially reversible causes of circulatory arrest on the principle of "4G; 4T ", the use of additional diagnostic methods, the scope and justification of drug therapy during resuscitation. Teamwork. Measures to restore brain function. Criteria for termination of resuscitation. Signs of biological death.	10
4.	**Topic 3. Emergency and urgent medical care for acute cerebral disorders.** Types and gradations of acute disorders of consciousness. Scale of evaluation of consciousness (Glasgow, FOUR). Coma: The definition, degree, cause, tactics of the coma patient’s vague etiology. Therapeutic and diagnostic tactics in comas related to glucose and insulin metabolism (hyperglycemic, hyperlactatemic, hyperosmolar, hypoglycemic). Cramping: causes, types, patient management tactics. Management tactics for patients with acute mental disorders: patient arousal or aggression, mental disorder. Suspected stroke / transient ischemic attack: definition, diagnostic criteria, BEFAST rating, diagnostic treatment and transport organization.	10
5.	**Topic 4. Emergency and urgent medical care for mechanical injuries.** Diagnosis and treatment at the pre-hospital stage of mechanical damage to the skull, spine, thorax, abdominal, pelvic and pelvic organs, and limbs. Diagnostics and tactics of the mobile brigade in case of poltrauma, prolonged compression and crushing syndrome, external and internal bleeding, traumatic and haemorrhagic shock, haemo and pneumothorax..	10
6.	**Topic 5. Algorithm for providing emergency medical assistance to victims in the accident.** Techniques for stopping external	5

	bleeding. Technique of transport immobilization of various bone segments in the pre-hospital stage. Thoracic puncture under severe pneumothorax. Occlusion bandage.	
7.	**Preparation for final module control**	4
	TOTAL	60

Individual tasks

1. Preparation of refinement on the subject of discipline.
2. Preparation of student scientific work on the subject of discipline

List of theoretical questions for preparing students for final module control and semester final certification:

1. Comparative characteristics of organizational systems for providing EUMC in different countries
2. Organization of activity of EUMC Ukraine service (structure and tasks);
3. The main tasks, functions, rights and responsibilities of health care providers in providing EUMC;
4. Ethical, deontological and communicative aspects of EUMC;
5. Equipment of the EUMC field crew (medical products, medicines, special facilities);
6. EUMC Brigade Call Rules;
7. Time of arrival of the EUMC machine;
8. Rules of registration of the EUMC card;
9. Interaction of the team with the main base, report on the clinical situation;
10. Ergonomic principles in the work of the EUMC field crew, teamwork;
11. Strategic concepts about “platinum” half an hour and “golden” hour;
12. Aims and objectives of the initial survey;
13. Aims and objectives of the secondary examination;
14. Procedure of EUMC crews in the center of mass destruction;
15. Interaction with the rescue services, responsibility of each of them;
16. Organization of medical sorting zone, medical aid area (medical center) and transport zone (evacuation);
17. Primary medical sorting by START. Rules for the use of sorting bracelets and coupons;
18. The concept of terminal states. Signs of clinical death;
19. Causes of cardiac arrest. Stages and stages of cardiopulmonary and cerebral resuscitation of CPR by P. Safar. European Council for Resuscitation (ERC) medical action programs: BLS, ILS, ALS, EPBLS, EPILS, EPALS, NLS ETC;
20. And the (immediate) stage of SLRC. Basic Life Support (BLS and EPBLS): Technology;
21. Features of SLRC depending on cause of clinical death and age of the patient. Evaluation of the effectiveness of resuscitation measures. (SLRC): Stages II and III;
22. Immediate life support (ILS, ERILS): types of cardiac arrest. technology, ECG-diagnostics of the type of stop of blood circulation, defibrillation (types, indications, safety);

23. Extended Life Support (ALS, EPALS): Tactics, diagnosis and treatment of potentially reversible causes of circulatory arrest based on the “4G” principle; 4T ”, the use of additional diagnostic methods, the scope and rationale for drug therapy during resuscitation. Teamwork;
24. Activities to restore brain function. Criteria for termination of resuscitation. Signs of biological death;
25. Types and gradations of acute disorders of consciousness. Scales of Consciousness Assessment (Glasgow, FOUR);
26. Coma: definitions, degrees, causes, tactics of patient management in coma of unclear etiology;
27. Diagnostic and therapeutic tactics for insects related to glucose and insulin metabolism (hyperglycemic, hyperlactatemic, hyperosmolar, hypoglycemic);
28. Cramps: causes, types, tactics of patient management;
29. Tactics of managing patients with acute mental disorders: excitation or aggression of the patient, mental disorders;
30. Suspicion of stroke / transient ischemic attack: definitions, diagnostic criteria, BEFAST score, diagnostic treatment and transportation-organizational tactics;
31. Respiratory control;
32. Diagnostic and therapeutic tactics for complete and partial obstruction of the respiratory tract by a foreign body;
33. Diagnostic and therapeutic tactics of laryngeal edema;
34. Drowning: types, mechanisms, clinic, features of providing EUMC;
35. Diagnostic and therapeutic tactics about bronchial obstructive syndrome, pulmonary edema;
36. Diagnostic-therapeutic and organizational tactics in syncope and presyncopal state;
37. Diagnostic-therapeutic and organizational tactics for chest pain / acute coronary syndrome;
38. Diagnostic-therapeutic and organizational tactics for beard and tachycardia;
Diagnostic-therapeutic and organizational tactics for cardiogenic shock;
39. Diagnostic-therapeutic and organizational tactics in hypertensive crisis;
40. Diagnostic-therapeutic and organizational tactics for anaphylactic shock
41. Diagnostic-therapeutic and organizational tactics in the sun. heat stroke.
42. Diagnostic-therapeutic and organizational tactics in case of hypothermia. frostbite.
43. Diagnostic-therapeutic and organizational tactics at thermal. chemical burns and burn shock.
44. Diagnostic-therapeutic and organizational tactics in case of natural and artificial electric shock.
45. Diagnostic-therapeutic and organizational tactics for radiation damage.
46. Diagnostic-therapeutic and organizational tactics for bites and stings of animals and plants.
47. Definition of the concept of poison. ways of getting poison into the body. metabolic phases of poison.
48. General tactics of treatment of acute exogenous poisoning.
49. Diagnostic-therapeutic and organizational tactics for mechanical damage to the skull.

50. Diagnostic-therapeutic and organizational tactics for mechanical damage to the spine.
51. Diagnostic-therapeutic and organizational tactics for mechanical injuries of the chest.
52. Diagnostic-therapeutic and organizational tactics at mechanical damages of bodies of an abdominal cavity.
53. Diagnostic-therapeutic and organizational tactics for mechanical damage to the pelvis and pelvic organs.
54. Diagnostic-therapeutic and organizational tactics for mechanical injuries of the extremities.
55. Diagnosis and tactics of the visiting team at polytrauma.
56. Diagnostic-therapeutic and organizational tactics for mechanical injuries of the syndrome of long-term compression and crushing.
57. Diagnostic-therapeutic and organizational tactics for external and internal bleeding.
58. Diagnostic-therapeutic and organizational tactics in traumatic and hemorrhagic shock.
59. Diagnostic-therapeutic and organizational tactics in hemo- and pneumothorax.
60. Algorithm for providing emergency medical assistance to victims in a traffic accident.

List of practical skills for final module control:

1. Organize teamwork for the provision of EUMC;
2. Assess the situation and identify hazards;
3. To carry out medical sorting according to START system;
4. Evacuate the victim from the vehicle, including - using Rautek techniques;
5. Remove the helmet from the rider;
6. Use the techniques of translation, fixation and transportation of the patient and the victim,
7. To collect anamnesis on the schemes «OPQRST» and «SAMPLE»;
8. Conduct primary examination of the patient (victim);
9. To conduct secondary examination of the patient (victim);
10. Establish the leading syndrome and choose the appropriate EUMC treatment protocol;
11. Perform audit and rehabilitation of the oral cavity by manual and hardware means,
12. Restore the airway (Safari techniques, air duct, laryngeal mask, kombiutub, tracheal intubation);
13. Organize oxygen and respiratory therapy (elementary methods, manual and automatic respirators);
14. Perform manual and hardware compression with indirect cardiac massage
15. Perform Heimlich Reception,
16. Conduct emergency conicotomy;
17. To establish peripheral long-term administration of medicines;
18. To establish intraosseous administration of medicines.
19. To conduct basic, immediate and expanded complexes of cardio-pulmonary resuscitation;

20. Use electric defibrillator (automatic external and manual);
21. Evaluate capillary filling;
22. Assess consciousness level on AVPU, Glasgow, FOUR scales);
23. To conduct screening diagnostics of stroke / transient ischemic attack on the BEFAST scale;
24. To register a 12-channel ECG;
25. To impose a hemostatic harness;
26. To apply a cervical collar;
27. To impose a transport bus;
28. To carry out immobilization in case of spine injury;
29. Measure and interpret blood pressure values;
30. Impose an occlusive valve connection on open and intense pneumothorax;
31. Drain the pleural cavity with intense pneumothorax;
32. Break through pulse oximetry;
33. To conduct analysis of level of glucose in blood;
34. Conduct capnography.

System of current and final control

Current control is carried out by the researcher and pedagogue systematically, during practical classes, the implementation of a specific type of work provided for in the working curriculum of the discipline.

With the beginning of teaching the discipline, the requirements for current control are brought to the notice of applicants for higher education.

The teacher must assess the success of each student in each class on a four-point (traditional) scale, taking into account standardized, generalized criteria for assessing the knowledge of higher education.

Table 1

Standardized generalized criteria for assessing the knowledge of higher education students in UMSA

On a 4-point scale	Score in ECTS	Evaluation criteria
5 (excellent)	A	The student shows special creative abilities, is able to acquire knowledge independently, without the help of the teacher finds and processes the necessary information, is able to use the acquired knowledge and skills for decision-making in unusual situations, convincingly argues answers, independently reveals own talents and inclinations, possesses not less than 90 % of knowledge on the topic both during the survey and all types of control.

4 (good)	B	The student is fluent in the studied amount of material, applies it in practice, freely solves exercises and problems in standardized situations, independently corrects errors, the number of which is insignificant, has at least 85% knowledge of the topic as during the survey, and all types of control .
	C	The student is able to compare, summarize, systematize information under the guidance of a scientific and pedagogical worker, in general, independently apply it in practice, control their own activities; to correct mistakes, among which there are significant ones, to choose arguments to confirm opinions, has at least 75% of knowledge on the topic both during the survey and all types of control.
3 (satisfactory)	D	The student reproduces a significant part of the theoretical material, shows knowledge and understanding of the main provisions 3 with the help of research and teaching staff can analyze educational material, correct errors, among which there is a significant number of significant, has at least 65% knowledge 3 topics as during the survey, and all types of control.
	E	The student has the educational material at the level of higher than the initial, a significant part of it reproduces at the reproductive level, has at least 60%) knowledge of 3 topics both during the survey and all types of control.
2 (unsatisfactory)	PX	The student has the material at the level of individual fragments that make up a small part of the material, has less than 60%) knowledge of the topic both during the survey and all types of control.
	P	The student has the material at the level of elementary recognition and reproduction of individual facts, elements, has less than 60%) knowledge of the topic as during the survey, and all types of control.

After the current lesson, which precedes the final module control, the conversion of the total assessment of renal performance for the module and the traditional 4-point scale is converted into a multi-point (maximum 120 points) according to table 2.

table 2

Unified table of correspondence of scores for current performance, scores for FMC, exam, and traditional four-point score.

Average score for current	**Points for current**	**Points for**	**Points for the module**	**ECTS Category**	**By 4-point scale**

performanc e (A)	success from the module (A * 24)	PMK from the module (A * 16)	and / or exam (A * 24 + A * 16)		
2	48	32	80	F	2
2,1	50	34	84	FX	unsatisfactory
2,15	52	34	86		
2,2	53	35	88		
2,25	54	36	90		
2,3	55	37	92		
2,35	56	38	94		
2,4	58	38	96		
2,45	59	39	98		
2,5	60	40	100		
2,55	61	41	102		
2,6	62	42	104		
2,65	64	42	106		
2,7	65	43	108		
2,75	66	44	110		
2,8	67	45	112		
2,85	68	46	114		
2,9	70	46	116		
2,95	71	47	118		
3	72	50	122	E	3
3,05	73	50	123		satisfactory
3,1	74	50	124		
3,15	76	50	126		
3,2	77	51	128		
3,25	78	52	130	D	
3,3	79	53	132		
3,35	80	54	134		
3,4	82	54	136		
3,45	83	55	138		
3,5	84	56	140	C	4
3,55	85	57	142		good
3,6	86	58	144		
3,65	88	58	146		
3,7	89	59	148		
3,75	90	60	150		
3,8	91	61	152		
3,85	92	62	154		
3,9	94	62	156		
3,95	95	63	158		
4	96	64	160	B	
4,05	97	65	162		

4,1	98	66	164		
4,15	100	66	166		
4,2	101	67	168		
4,25	102	68	170		
4,3	103	69	172		
4,35	104	70	174		
4,4	106	70	176		
4,45	107	71	178		
4,5	108	72	180	A	5 excellent
4,55	109	73	182		
4,6	110	74	184		
4,65	112	74	186		
4,7	113	75	188		
4,75	114	76	190		
4,8	115	77	192		
4,85	116	78	194		
4,9	118	78	196		
4,95	119	79	198		
5	120	80	200		

The final module control is carried out after the completion of the study of all topics of the module at the last control session of the module.

Students who have attended all the classrooms provided by the curriculum in the discipline and have scored at least the minimum number of points during the study of the module are admitted to the final control. do not have unexploited omissions of lectures, practical classes, have mastered the topics made for independent work within the module.

A student who, for valid or non-valid reasons, has missed classes is allowed to work off academic arrears until a certain deadline.

The minimum convertible sum of points of current success for all modules of the discipline **is 72 points**.

The FMC score is evaluated in points and is not converted into a traditional 4-point score. The maximum number of FMC points is 80 points. The minimum number of FMC points at which the control is considered completed is 50 points. The maximum number of points per module is 200 points (of which up to 120 points for current performance).

Applicants for higher education, who during the study of the module, had an average score of 4.50 to 5.0 are exempted from the FMC and automatically (by agreement) receive a final grade, respectively (to Annex 1), with the presence of the applicant at the FMC is required.

conditions of violation by the applicant of higher education of the rules of academic integrity (p.2.2.5. Rules of Procedure) the results of the assessment obtained during the preparation of the FMC student for the answer is graded "unsatisfactory".

The form of final module control is standardized and includes control of theoretical and practical training.

FMC structure

Test control 50 tests = 50 minutes	0-20 points
Theoretical question	0-30 points
Practical experience: -Cardiopulmonary resuscitation	0-30 points

The result of the final module control is evaluated in points (traditional 4-point evaluation is not given). The maximum number of points of the final modular control is 80 points. The minimum number of points of the final module control, for which the control is considered to be passed, is 50 points.

Learning methods.

The basic types of educational activity of students according to the curriculum are:
- verbal (lecture, explanation, story, conversation);
- visual (observation, illustration, demonstration);
- practical (different types of management: performing manipulations, assisting the doctor in clinical situations, drawing up a treatment plan).

Active teaching methods: (thematic discussions, brainstorming, analysis of specific situations (case method), trainings, business games)

Control methods:
- oral control;
- written control;
- test control;
- programmable control;
- practical check;
- self-control;
- self-esteem

Types of control:
- previous (incoming);
- current;
- final modular control.

Methodological support:

1. Work curriculum;
2. Methodical development of lectures;
3. Guidelines for teachers;
4. Methodical instructions for independent work of students during the preparation for practical training and at the class
5. List of recommended literature;
6. materials for control of students' knowledge, skills and skills:
- tests of different levels of difficulty;
- tests from the bank of licensing examinations "Step-2: General medical preparation";
- situational tasks;

7. Videos;
8. Multimedia presentations.

Recommended Books

Basic

1. Oxford Handbook of Emergency Medicine. Fifth ed. Wyatt J.P., Illingworth R.N., Graham C.A., Hogg K.. Oxford University Press, 2020 – 804.

Auxiliary:

1. Buchenmaier C, Nahoney PF (eds.). COMBAT ANESTHESIA: THE FIRST 24 HOURS. Textbooks of Military Medicine. Fort Sam Houston, Texas. 2015, - 977 pp.
2. Harwood-Nuss' Clinical practice of emergency medicine. Sixth ed. Allan B. Wolfson Ed. 2015 Wolters Kluwer. 4901 pp.
3. Wolfson AB (ed). Harwood-Nuss' Clinical Practice of Emergency medicine. Sixth ed, Wolters Kluwer. 2015, 4901pp.

Information resources

1. Official site of the State Institution "Ukrainian Scientific and Practical Center for Emergency Care and Disaster Medicine of the Ministry of Health of Ukraine" - http://emergency.in.ua/ukrainiancem
2. Official site of the European Resuscitation Council - https://www.erc.edu/
3. Official site of the European Emergency Medicine Association - https://eusem.org/
4. Official site of the American Academy of Emergency Medicine https://www.aaem.org/about-us/our-values/mission-statement
5. American College of Emergency Medicine Official Website https://www.acep.org/
6. The official website of the Association of Residents of Emergency Medical Services https://www.emra.org/
7. Official site of the German Society for Interdisciplinary Emergency and Emergency Medicine - https://www.dgina.de/
8. Official site of the Association of Anesthesiologists of Ukraine - http://aay.org.ua
9. Official site of the Association of Anesthesiologists, Kyiv - http: // http: //criticalcare.kiev.ua
10. Official site of the European Association of Anesthesiologists -http: //www.euroanesthesia.org
11. Official site of the European Intensive Care Association - http://www.esicm.org
12. Official site of the American Association of Anesthesiologists http://www.asahq.org/homepageie.html
13. Official site of the international scientific periodical Emergency Medicine Journal - https://emj.bmj.com/
14. Official Journal of the Emergency Medicine Journal of International Scientific Periodicals https://www.jem-journal.com/
15. Official site of The American Journal of Emergency Medicine - https://www.jamjournal.com/

16. Official site of the international scientific periodical Anesthesiology - http://www.anesthesiology.org
17. Anesthesia and Analgesia Official Scientific Website - http://www.anesthesia-analgesia.org
18. British Journal of Anaesthesia Official Website of the British Scientific Periodical - http://www.bja.oupjournals.org
19. Official site of the British Scientific Periodical British Scientific Journal - http://www.bmj.com
20. Canadian Journal of Anaesthesia Official Website of the Canadian Scientific Periodical - http://www.cja-jca.org
21. The official site of the international scientific periodical The Lancet - http://www.thelancet.com
22. Official site of the British Scientific Periodicals History of Anesthesia Society - http://www.histansoc.org.uk
23. Scopus Scientific Literature Search Resource - https://www.scopus.com
24. Web os Science Fiction Search -http: //ipscience.thomsonreuters.com/product/web-of-science/
25. Cochrane Collaboration Medical Literature Search Resource - http://www.cochrane.org
26. PubMed medical literature search resource - http://www.ncbi.nlm.nih.gov/PubMed/
27. Medical literature search resource (Anesthesiology and Intensive Care Unit - http://www.twirpx.com/files/medicine/anaesthesiology/anesthesiology/

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