

**MINISTRY OF HEALTH PROTECTION OF UKRAINE
ODESSA NATIONAL MEDICAL UNIVERSITY**

Faculty of Medicine

**Department of General, Pediatric and Military Surgery with a course in Urology and
Ophthalmology**

**Syllabus of the academic discipline
"First pre-medical aid with introductory medical practice"**

Scope of the academic discipline	Total number of hours per discipline: 90 hours, 3 credits. Semesters: III. 2 year of study.
Days, time, place of educational discipline	According to the schedule of classes. Department of General, Pediatric and Military Surgery with a course in Urology and Ophthalmology Odesa, str. Pastera 9, ave . Valikhovskyi , 5, Multidisciplinary Medical Center of ONMedU . 1 surgical department, 2 surgical department
Teacher(s)	Dr. Med. Sci., Prof. Kashtalyan M.A.; Dr. Med. Sci., Prof. Vansovych V.E.; Ph.D., Assoc. Prof. Davydov D.M.; Ph.D., Assoc. Prof. Tsipovyaz S.V.; Ph.D., Assoc. Prof. Kvasnevsky E.A.; Ph.D., Assoc. Prof. Kvasnevsky O.A.; Ph.D., Assoc. Prof. Ilyina-Stognienko V.Yu.; Ph.D., Assistant Romak O.I.; Assistant Bilash O.V.; Assistant Vityuk M.S.
Contact Information	Help by phone: Bilash Oksana Viktorivna, head teacher of the department 093-848-4048 Ilyina-Stognienko Viktoriya Yuriivna , responsible for organizational and educational work of the department 067-971-21-05 Zhebrakovska Maryna Yuriivna, senior laboratory technician of the department 050-316-10-91 E - mail : surgdep@onmedu.edu.ua Face-to-face consultations: from 2:00 p.m. to 5:00 p.m. every Thursday, from 9:00 a.m. to 2:00 p.m. every Saturday Online consultations: from 2:00 p.m. to 5:00 p.m. every Thursday, from 9:00 a.m. to 2:00 p.m. every Saturday. The link to the online consultation is provided to each group during classes separately.

COMMUNICATION

Communication with applicants will be conducted in the classroom (face-to-face).

During distance learning, communication is carried out through the Microsoft Teams platform, as well as through Outlook e-mail correspondence .

ABSTRACT OF THE ACADEMIC DISCIPLINE

Subject study of the discipline - the basic theoretical principles of first aid, mastering the practical skills of providing emergency aid to victims at the scene of the incident and during

transportation to a medical facility.

Prerequisites and post-requisites of the discipline (place of the discipline in the educational program):

Prerequisites: Ukrainian language (by professional direction), foreign language (by professional direction), biological physics with physical methods of analysis, Latin language, biology with the basics of genetics, human anatomy, human physiology, pathological physiology, general and inorganic chemistry, biological chemistry.

Post-requisites: extreme medicine, training of reserve officers of the field of knowledge "Health care".

The goal of the discipline: Mastering the basic theoretical principles of first aid by the student of higher education, mastering the practical skills of providing emergency aid to victims at the scene of the incident and during transportation to a medical institution.

Tasks of the discipline:

1. Formation of skills and abilities: for carrying out cardiopulmonary resuscitation, stopping bleeding, using report cards and improvised ties for transport immobilization of victims in order to save their lives.

2. Mastery of skills: cardiopulmonary resuscitation, temporary stoppage of bleeding, application of bandages, report cards and improvised splints.

3. Mastering the skills: to determine the tactics of emergency medical care for wounds, injuries, acute therapeutic pathology, acute surgical diseases, emergency conditions in pregnant women and children;.

Expected results:

As a result of studying the academic discipline, the applicant must:

Know:

1. Algorithms for temporary stopping of bleeding.
2. Cardiopulmonary resuscitation algorithm.
3. Algorithm of pre-medical care for asphyxia.
4. Algorithm for performing cricothyropuncture.
5. Algorithm of first aid for poisoning and drug overdose.
6. First aid algorithm for thermal burns.
7. First aid algorithm for chemical burns.
8. First aid algorithm for frostbite.
9. Action algorithm for animal bites.
10. Algorithms of pre-medical care for fractures.
11. Algorithm of actions for dislocations.
12. First aid algorithm for gunshot and knife wounds.
13. Immediate actions in case of allergic reactions.
14. Action algorithm for infectious diseases, organization of quarantine.
15. Pre-medical care for angina pectoris, myocardial infarction.
16. First aid algorithm for bronchial asthma.
17. Tactics for abdominal pain.
18. First aid algorithm for hyperthermia.
19. Algorithms of first pre-medical aid for emergency conditions in children.
20. Stages of physiological childbirth, processing of the umbilical cord.
21. Actions for insect bites.
22. First aid algorithm for positional compression syndrome.

Be able:

1. Apply improvised and standard splints for immobilization.
2. Evacuate the victim from the car.
3. Transport victims with various types of injuries.
4. Apply bandages.
5. Wash the stomach.

6. Wash the eyes.
7. Treat wounds.

DESCRIPTION OF THE ACADEMIC DISCIPLINE

Forms and methods of education

The discipline will be taught in the form of lectures (10 classroom hours), practical classes (40 classroom hours), organization of independent work of the applicant (40 hours).

Teaching methods: conversation, solving clinical situational problems, demonstration and practice of manipulation skills according to list 5, instruction and practice of skills on simulation dummies.

First pre-medical aid with introductory medical practice

Content of the academic discipline

Content module 1. Basic principles of first aid.

Topic 1. The importance of first aid.

General principles and logic of providing first aid in peacetime, wartime and mass casualties. Principles of medical sorting. Diagnostic and treatment algorithms. Typical mistakes.

Topic 2. General principles and sequence of providing first aid.

Manipulations and medications – their role in first aid. Fundamentals of resuscitation. Cardiopulmonary resuscitation. Terminal states. Resuscitation measures.

Topic 3. Desmurgia.

Characteristics of dressing materials. Bandages, adhesive, handkerchief, plaster. Types of bandages: protective, pressing, therapeutic, correcting. Rules and technique of applying bandages on the head and chest, abdomen. Bandages on the limbs: circular, spiral, turtle, on the finger and fingers of the hand, spike-shaped, eight-shaped on the hand, Dezo.

Topic 4. Asepsis and antiseptics.

Preservation of the principles of asepsis and antiseptics when providing first aid. Ways of spread of infection. Prevention of the spread of exogenous and endogenous infection. Disinfection. Sterilization. Mechanical, physical, chemical, biological and mixed antiseptics.

Content module 2. Wounds. Bleeding, blood loss. Basics of hemotransfusiology.

Topic 5. Wounds. Concept. Wound assessment methodology (neurovascular component, area and depth of tissue loss, degree of contamination, localization). First aid for various types of wounds. Bite wounds - treatment principles, registration and observation rules. Prevention of gas gangrene, tetanus and rabies. Crash syndrome: causes, manifestations, dangers, first aid tactics.

Topic 6. Bleeding. Definition, classification of bleeding. Ways to temporarily stop bleeding (pressing the wound, elevated position, finger pressure of projection points, splinting, applying a tourniquet, compressing bandage, applying a clamp, nasal tamponade): technique, indications, contraindications, typical errors. Rules of asepsis and antiseptics when stopping bleeding. Final methods of stopping bleeding.

Topic 7. Hemorrhagic shock. Concepts, causes, manifestations, Algover's index, first aid. Features, dangers and clinical signs of internal bleeding. First aid for internal bleeding. Transfusion of blood, blood components and blood substitutes.

Content module 3. Trauma and damage.

Topic 8. First aid for injuries and injuries.

Immediate actions at the place of injury. Sequence of care for mass lesions. Rules for evacuation of victims. Methods of immobilization, transportation. Typical mistakes.

Topic 9. Bone fracture.

Diagnostics and first aid. Sequence of medical actions for complicated fractures. Diagnosis of dislocations, first aid, traumatic amputations: first aid. Closed injuries of soft tissues: classification, diagnosis, first aid.

Topic 10. Head and spine injury.

Head injury: mechanism of injury. Methods of examination of the injured. Assessment of the importance of head trauma: history, mechanism, vital signs, Glasgow scale, physical examination. Diagnostic signs of different types of trauma. Tactics of emergency care: Primary examination, immobilization, transportation, secondary examination. First aid mistakes. Spinal injury: Mechanism of injury. Methodology of examination of the spine. Spinal shock, tetraplegia and paraplegia. Tactics of emergency care: primary examination, immobilization, transportation, secondary examination. Dynamic observation. First aid mistakes.

Topic 11. Injury of the chest, abdomen and pelvis.

Chest injuries: mechanism of injury. Methodology of examination of chest organs. Open, closed and valvular pneumothorax, massive hemothorax, cardiac tamponade, bulging chest, heart injury, airway obstruction. Principles of hospital care. First aid mistakes. Injuries of organs of the abdominal cavity and pelvis: mechanism of injury. Examination methodology. Complications that are life-threatening (intra-abdominal bleeding, peritonitis, evisceration).

Topic 12. Burns, frostbite , electric shock.

Methods of examination of burned people (determination of depth, area, severity of burn). Principles of resuscitation and providing first aid to burned and electrocuted victims. Inhalation injuries: diagnosis and first aid. Chemical, radiation and radiation burns: features of diagnosis and first aid.

Content module 4. First medical aid for acute surgical and therapeutic diseases. Logic of actions in emergency obstetric conditions, first aid for acute conditions in children.

Topic 13. Poisoning. Conditions, classification, dangers.

Assessment of the patient's condition – respiratory function, cardiovascular system, consciousness, collection of necessary information. Mushroom poisoning. First aid for poisoning: gastric lavage technique, antidotes, sorbents, some medical preparations. Bites of poisonous animals and insects: first aid. Care of a patient who has suffered poisoning.

Topic 14. Acute "therapeutic" diseases of the organs of the cardiovascular and respiratory systems.

Myocardial infarction, acute cardiovascular failure, cardiogenic shock, arrhythmia, hypertensive crisis. An attack of bronchial asthma. Principles of diagnostics and first aid. Allergy, anaphylaxis, allergens. Clinical manifestations and variants of the course (lightning, asthmatic, cardiac, neurological, abdominal, skin). Pulmonary edema. Quincke's edema. First aid.

Topic 15. Shock. Collapse. Coma.

Loss of consciousness, shock, collapse, coma: Definition, etiology, assessment of the patient's condition (initial examination, medical history, physical examination). Pre-hospital care for insects of unclear etiology: head injuries, diabetes (hypoglycemia, hyperglycemia, ketoacidosis), cardiovascular diseases (cardiogenic shock, arrhythmias), convulsions (epilepsy), stroke, hypo- and hyperthermia, anaphylaxis (medicines, insect bites, products), poisoning (ingestion, carbon monoxide).

Topic 16. Logic of actions in urgent obstetric conditions, first pre-medical aid in acute conditions in children. Typical mistakes.

Anatomical and physiological features of pregnant women. Pregnancy. Bleeding, Preeclampsia, eclampsia, uterine rupture, placental abruption, umbilical cord prolapse, threat of abortion, ectopic pregnancy, trauma - recognition, first aid. Transportation of pregnant women. Childbirth. Neonatal resuscitation. Physiology of childbirth. Harbinger of childbirth, Stages and mechanism of childbirth. Acceptance of normal spontaneous childbirth: financial support, treatment of the umbilical cord and the child. Anatomical and physiological features of children.

Airway obstruction, asthma, epiglottitis, croup, bronchitis, fibrillary convulsions, hyperthermia - diagnosis and first aid. Peculiarities of resuscitation of children.

Topic 17. "Acute stomach."

Diseases united by the term "acute abdomen": acute appendicitis, cholecystitis, pancreatitis, perforated ulcer of the stomach and duodenum, pinched hernia, intestinal obstruction. Causes, manifestations, pre-hospital diagnosis, first aid, principles of treatment at the hospital stage. Common first aid mistakes.

Test.

List of recommended literature:

Main:

1. ABC of Prehospital Emergency Medicine / за ред. Tim Nutbeam, Matthew Boylan. – 2-е вид. – Chichester : Wiley-Blackwell, 2023. – 288 с. – ISBN 978-1119698326.
2. Olympia R. P., Lubin J. S. Prehospital Emergency Medicine Secrets. – 1-е вид. – [Місце вид.] : Elsevier Health, 2022.
3. Mistovich J. J., Karren K. J., Hafen B. Prehospital Emergency Care. – 11-е вид. – [Місце вид.] : Pearson, 2017. – 1552 с. – ISBN 978-0134704456.
4. Sabiston D. C., Townsend C. M. Sabiston Textbook of Surgery: The Biological Basis of Modern Surgical Practice. – 21-е вид. – Philadelphia : Elsevier, 2021. – 2200 с. – ISBN 978-0323640633.
5. Brunicki F. C., Andersen D. K., Billiar T. R. та ін. Schwartz's Principles of Surgery. – 12-е вид. – New York : McGraw-Hill Education, 2022. – 2016 с. – ISBN 978-1260461356.
6. Білоус Т. Л. До лікарської допомоги : навч. посіб. – Суми : Мрія, 2020. – 148 с.
7. Волянський П. Б., Гринзовський А. М., Гур'єв С. О. та ін. Домедична допомога на місці події : практичний посібник / за ред. П. Б. Волянського, С. О. Гур'єва. – Херсон : Гельветика, 2020. – 224 с.
8. Швед М. І., Гудима А. А., Геряк С. М. та ін. Екстрена медична допомога : підручник / за ред. М. І. Шведа. – Тернопіль : ТДМУ, 2015. – 420 с.
9. Бігуняк В. В., Бодяк В. Ю., Гудима А. А. та ін. Загальна хірургія : підручник. – Київ : ВСВ «Медицина», 2021. – 640 с.
10. Каштальян М. А., Вансович В. Є., Давидов Д. М. та ін. Загальна хірургія : підручник для студентів медичних факультетів. – Одеса : ОНМедУ, 2020. – 580 с.

Additional:

1. Pikoulis E., Doucet J. (eds.). Emergency Medicine, Trauma and Disaster Management: From Prehospital to Hospital Care and Beyond. – Cham : Springer, 2021. – 624 с. – ISBN 978-3-030-34116-9.
2. Perdita A. H. M. A Textbook of First Aid. – [Місце вид.] : Vikas Publishing, [рік не зазначено]. – 316 с. – ISBN 978-9382711254.
3. Cameron J. L., Cameron A. M. (eds.). Current Surgical Therapy. – 14-е вид. – Philadelphia : Elsevier, 2023. – 1696 с. – ISBN 978-0323796835.
4. Holzheimer R. G., Mannick J. A. (eds.). Surgical Treatment: Evidence-Based and Problem-Oriented. – Munich : Zuckschwerdt, 2020 (оновл. електронне вид.). – 950 с.
5. Бобак К., Бобак А., Киретов В. Невідкладні стани в хірургії : навч. посіб. – Київ : ВСВ «Медицина», 2017. – 560 с.
6. Виноградов О. О., Ропасва М. О., Гужва О. І., Радченко А. В. Десмургія : навч. посіб. – Старобільськ : ЛНУ ім. Т. Шевченка, 2015. – 80 с.
7. Зозуля І. С., Вершигора А. В., Боброва В. І. та ін. Медицина невідкладних станів: швидка і невідкладна медична допомога / за ред. І. С. Зозулі. – Київ : ВСВ «Медицина», 2012. – 728 с.

8. Крилюк В. О., Гур'єв С. О., Гудима А. А., Іскра Н. І. та ін. Екстрена медична допомога травмованим на догоспітальному етапі : навч. посіб. – Київ, 2016. – 400 с.
9. Тарасюк В. С., Матвійчук М. В., Паламар М. В. та ін. Перша медична (екстрена) допомога з елементами тактичної медицини на догоспітальному етапі в умовах надзвичайних ситуацій. – Київ : Медицина, 2015. – 312 с.
10. Грицуляк Б. В., Бойко В. В., Гринчук Ф. С. та ін. Загальна хірургія з оперативною хірургією та топографічною анатомією : навч. посіб. – Тернопіль : Укрмедкнига, 2019. – 456 с.
11. Кузин М. І., Костюченко А. Л. Хірургія : підручник. – Київ : ВСВ «Медицина», 2017. – 728 с.

Electronic information resources

1. <https://moz.gov.ua/> – Ministry of Health of Ukraine
2. www.ama-assn.org - American Medical Association / American Medical Association
3. www.who.int - World Health Organization
4. www.dec.gov.ua/mtd/home/ - State Expert Center of the Ministry of Health of Ukraine
5. <http://bma.org.uk> - British Medical Association
6. <http://iss-sic.com/> - International Society of Surgeons

ASSESSMENT

Current control: oral survey, testing, assessment of performance of practical skills, solution of situational clinical tasks, assessment of activity in class.

Final control : credit.

The structure of the current evaluation in the practical lesson :

1. Evaluation of theoretical knowledge on the subject of the lesson:
 - methods: survey, solving a situational clinical problem;
 - the maximum score is 5, the minimum score is 3, the unsatisfactory score is 2 .
2. Evaluation of practical skills and manipulations on the subject of the lesson:
 - methods: assessment of the correctness of the performance of practical skills
 - the maximum score is 5, the minimum score is 3, the unsatisfactory score is 2 .

Current evaluation criteria in practical training

Rating	Evaluation criteria
"5"	The applicant is fluent in the material, takes an active part in discussing and solving a situational clinical problem, confidently demonstrates practical skills and interpretations of clinical, laboratory and instrumental research data, expresses his opinion on the subject of the lesson, demonstrates clinical thinking.
"4"	The applicant has a good command of the material, participates in the discussion and solution of a situational clinical problem, demonstrates practical skills and interpretations of clinical, laboratory and instrumental research data with some errors, expresses his opinion on the subject of the lesson, demonstrates clinical thinking.
"3"	The applicant does not have sufficient knowledge of the material, is unsure of participating in the discussion and solution of a situational clinical problem, demonstrates practical skills and interpretations of clinical, laboratory and instrumental research data with significant errors.
"2"	The applicant does not possess the material, does not participate in the discussion and solution of the situational clinical problem, does not demonstrate practical skills and interpretation of clinical, laboratory and instrumental research data.

The final control in the form of a credit is evaluated on a two-point scale: - the grade "passed" is awarded to an education seeker who has completed the curriculum of the discipline and has no academic debt; the level of competence is high (creative); – the grade "failed" is assigned to an education seeker who has not completed the curriculum of the discipline, has academic debt (average grade below 3.0 and/or missed classes); the level of competence is low (receptive - productive).

INDEPENDENT WORK OF STUDENTS OF HIGHER EDUCATION

Independent work involves preparation for each practical session.

POLICY OF EDUCATIONAL DISCIPLINE

Deadlines and Rescheduling Policy :

- Absences of classes for non-respectable reasons are made up according to the regular schedule teacher
- Absences for valid reasons are worked out according to an individual schedule with the permission of the dean's office.

Academic Integrity Policy :

Applicants must observe academic integrity, namely:

- independent performance of all types of work, tasks, forms of control provided for by the work program of this educational discipline;
- references to sources of information in case of use of ideas, developments, statements, information;
- compliance with the legislation on copyright and related rights;
- provision of reliable information about the results of one's own educational (scientific) activity, used research methods and sources of information.

Unacceptable in educational activities for participants of the educational process are:

- the use of family or official ties to obtain a positive or higher grade during any form of control of academic performance or academic merit;
- use of prohibited auxiliary materials or technical means (cheat sheets, notes, micro-earphones, telephones, smartphones, tablets, etc.) during control measures;
- going through procedures for monitoring the results of training by fake persons.

For violation of academic integrity, students may be held to the following academic responsibility:

- a decrease in the results of assessment of the control work, assessment in class, credit, etc.;
- retaking the assessment (test, credit, etc.);
- assignment of additional control measures (additional individual tasks, control works, tests, etc.);
- conducting an additional inspection of other works authored by the violator.

Attendance and Tardiness Policy:

Uniform: medical gown, surgical suit, cap, mask, change of footwear.

Equipment: notebook, pen, phonendoscope.

State of health: applicants suffering from acute infectious diseases, including respiratory diseases, are not allowed to attend classes.

A student who is late for class can attend it, but if the teacher has put "nb" in the journal, he must complete it in the general order.

Use of mobile devices :

Mobile devices may be used by students with the permission of the instructor if they are needed for the assignment.

Behavior in the audience:

The behavior of applicants and teachers in the classrooms should be working and calm, strictly responsible rules, installed Regulations on academic integrity and ethics of academic relations at Odessa National Medical University , in accordance with the Code of Academic Ethics and Relations of the University Community of Odessa National Medical University , Regulations on Prevention and Detection of Academic Plagiarism in Research and Educational Work of Graduates of education, scientists and teachers of Odessa National Medical University .