

MINISTRY OF HEALTH CARE OF UKRAINE
ODESSA NATIONAL MEDICAL UNIVERSITY

Department of Pediatrics No. 1



APPROVE

Acting vice-rector for scientific and pedagogical
work

Svitlana KOTIUZHYNska

09 2022

WORKING PROGRAM of a SELECTIVE DISCIPLINE

**"Emergency pediatric care for bleeding, accidents and poisoning. Practicing practical skills
on simulation equipment." »**

Level of higher education: second (master's degree)

Field of knowledge: 22 "Health care"

Specialty: 222 "Medicine"

Educational and professional program : "Medicine"

2022

The working program is compiled on the basis of the educational and professional program "Medicine", the training of specialists of the second (master's) level of higher education in the specialty 222 "Medicine" of the field of knowledge 22 "Health care", approved by the Academic Council of ONMedU, dated Jun 23, 2022, protocol No. 9.

Developers: head of the department, Corresponding Member of NAMS of Ukraine, DSc, Prof. Aryaev M.L., head teacher of the department, PhD, assoc. of professor Kaplina L. E., PhD, assoc. of professor Senkivska L. I., PhD ass.prof. Biryukov VS, assistant. Streltsov M.S.

The working program was approved at the meeting of the Department of Pediatrics No. 1

Protocol No. 21 dated June 29, 2022

Head of the department, Corresponding Member of NAMS of Ukraine,

DSc, Prof.

Mykola ARYAYEV

Agreed with the guarantor of the EPP

(signature)

(Valeria MARICHEREDA)
(Name SURNAME)

The program was approved at the meeting of the subject cycle commission for pediatric disciplines of ONMedU

Protocol No. 6 dated "30" 06 2022 y.

Head of the subject cycle methodical commission for pediatric disciplines, professor

(Natalia KOTOVA)

(signature)

(Name SURNAME)

Reviewed and approved at the meeting of the Department of Pediatrics No. 1

Protocol No. dated " " 20 y.

Head of the department (Mykola ARYAYEV)

(signature)

(Name SURNAME)

Reviewed and approved at the meeting of the Department of Pediatrics No. 1

Protocol No. dated " " 20 y.

Head of the department (Mykola ARYAYEV)

(signature)

(Name SURNAME)

1. Description of the academic discipline :

2. Name of indicators	Field of knowledge, specialty, specialization, level of higher education	Characteristics of the academic discipline
The total number of: Credits: 1.5 Hours: 45 Content modules: 1	Branch of knowledge 22 "Health care"	<i>Full-time education</i> <i>Elective discipline</i>
	Specialty 222 "Medicine"	<i>Year of training: 6</i>
		<i>Semester XI - XII</i>
		<i>Lectures (0 hours)</i>
	Specialization doctor	<i>Seminars (16 hours)</i>
		<i>Practical (0 hours)</i>
		<i>Laboratory (0 hours)</i>
	Level of higher education second (master's)	<i>Independent work (29 hours)</i>
		<i>including _ _ individual tasks (0 hours)</i>
		<i>Form of final control (according to the curriculum) - credit.</i>

2. The purpose and tasks of the educational discipline

Purpose : The applicant for higher education acquires additional knowledge and mastery of the professional competences of providing emergency aid to children in critical situations, based on the competences obtained during the study of previous disciplines.

Tasks:

1. Formation of skills and communication skills with a sick child or his parents.
2. Improving the skills of substantiating a clinical diagnosis, drawing up a plan for laboratory and instrumental research, in cases of bleeding, accidents and poisoning in children.
3. Mastering the ability to determine tactics provision of emergency aid at bleeding, accidents and poisoning in children.

The process of studying the discipline is aimed at forming elements of the following competencies :

General (GC):

- GC1 – Ability to abstract thinking, analysis and synthesis.
- GC2 – Ability to learn and master modern knowledge.
- GC3 – Ability to apply knowledge in practical situations.
- GC4 – Knowledge and understanding of the subject area and understanding of professional activity.
- GC5 – Ability to adapt and act in a new situation.
- GC6 – Ability to make reasonable decisions.
- GC7 – Ability to work in a team.
- GC8 – Ability to interpersonal interaction.
- GC10 – Ability to use information and communication technologies.
- GC11 – Ability to search, process and analyze information from various sources.
- GC12 – Determination and perseverance regarding the assigned tasks and assumed responsibilities.
- GC13 – Awareness of equal opportunities and gender issues.

- GC14 – Ability to realize one's rights and responsibilities as a member of society, to realize the values of public (free democratic) society and the need for its sustainable development, the rule of law, the rights and freedoms of a person and a citizen in Ukraine.
- GC15 – Ability to preserve and multiply moral, cultural, scientific values and achievements of society based on understanding the history and patterns of development of the subject area, its place in the general system of knowledge about nature and society and in the development of society, techniques and technologies, use different types and forms motor activity for active recreation and leading a healthy lifestyle.
- GC17 – Desire to preserve the environment.

Special (SC):

- SC1 – Ability to collect medical information about the patient and analyze clinical data.
- SC2 – Ability to determine the necessary list of laboratory and instrumental studies and evaluate their results.
- SC3 – Ability to establish a preliminary and clinical diagnosis of the disease.
- SC4 – Ability to determine the necessary regime of work and rest in the treatment and prevention of diseases.
- SC5 – Ability to determine the nature of nutrition in the treatment and prevention of diseases.
- SC6 – Ability to determine the principles and nature of treatment and prevention of diseases.
- SC7 – Ability to diagnose emergency conditions.
- SC8 – Ability to determine tactics and provide emergency medical care.
- SC11 – Ability to solve medical problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethical responsibility.
- SC13 – Ability to carry out sanitary and hygienic and preventive measures.
- SC16 – Ability to fill medical documentation, including electronic forms.
- SC17 – Ability to assess the impact of the environment, socio-economic and biological determinants on the state of health of an individual, family, population.
- SC21 – Ability to clearly and unambiguously convey one's own knowledge, conclusions and arguments on health care problems and related issues to specialists and non-specialists, in particular to people who are studying.
- SC24 – Adherence to ethical principles when working with patients and laboratory animals.
- SC25 – Adherence to professional and academic integrity, being responsible for the reliability of the obtained scientific results.
- SC26 – Ability to determine the management tactics of persons subject to dispensary supervision.

Expected learning outcomes. As a result of studying, the application's acquisition of the higher education must:

Have:

- PLO1 – Having a thorough knowledge of the structure of professional activity. Being able to carry out professional activities that require updating and integration of knowledge. To be responsible for professional development, the ability for further professional training with a high level of autonomy.
- PLO2 – Understanding and knowledge of basic and clinical biomedical sciences, at a level sufficient for solving professional tasks in the field of health care.
- PLO3 – . Specialized conceptual knowledge that includes scientific achievements in the field of health care and is the basis for conducting research, critical understanding of problems in the field of medicine and related interdisciplinary problems.
- PLO4 – Identifying leading clinical symptoms and syndromes (according to list 1); according to standard methods, using preliminary data of the patient's history, data of the patient's examination, knowledge about the person, his organs and systems, establish a preliminary clinical diagnosis of the disease (according to list 2)..
- PLO5 – Collecting complaints, history of life and diseases, assessing the psychomotor and physical development of the patient, the state of organs and systems of the body, based on the results of laboratory and instrumental studies, evaluation of the information regarding the diagnosis (according to list 4), taking into account the age of the patient..

- PLO6 – Establishing the final clinical diagnosis by making a reasoned decision and analyzing the received subjective and objective data of clinical, additional examination, carrying out differential diagnosis, observing the relevant ethical and legal norms, under the control of the managing physician in the conditions of the health care institution (according to the list 2).
- PLO7 – . Assigning and analyzing additional (mandatory and optional) examination methods (laboratory, functional and/or instrumental) (according to list 4) of patients with diseases of organs and body systems for differential diagnosis of diseases (according to list 2).
- PLO8 – Determination of the main clinical syndrome or symptom that determines the severity of the victim's/victim's condition (according to list 3) by making a reasoned decision about the person's condition under any circumstances (in the conditions of a health care facility, outside its borders), including in conditions of emergency and hostilities, in field conditions, in conditions of lack of information and limited time.
- PLO9 – Determination of the nature and principles of treatment (conservative, operative) of patients with diseases (according to list 2), taking into account the patient's age, in the conditions of a health care institution, outside its borders and at the stages of medical evacuation, including in field conditions, based on a preliminary clinical diagnosis, observing the relevant ethical and legal norms, by making a reasoned decision according to existing algorithms and standard schemes, in case of the need to expand the standard scheme, be able to justify personalized recommendations under the control of the head physician in the conditions of a medical institution.
- PLO10 – Determination of the necessary mode of work, rest and nutrition based on the final clinical diagnosis, observing the relevant ethical and legal norms, by making a reasoned decision according to existing algorithms and standard schemes.
- PLO12 – Assessment of the general condition of a newborn child by making a reasoned decision according to existing algorithms and standard schemes, observing the relevant ethical and legal norms.
- PLO13 – Assessment and monitoring of the child's physical and psychomotor development, provision of recommendations on feeding and nutritional features depending on age, and organization of preventive vaccinations according to the calendar.
- PLO14 – Determination of tactics and providing emergency medical care in emergencies (according to list 3) in limited time conditions according to existing clinical protocols and standards of treatment.
- PLO17 – Performing medical manipulations (according to list 5) in the conditions of a medical institution, at home or work based on a previous clinical diagnosis and/or indicators of the patient's condition by making a reasoned decision, observing the relevant ethical and legal norms.
- PLO21 – Searching for the necessary information in the professional literature and databases of other sources, analysing, evaluating and application of this information.
- PLO25 – Conveying one's knowledge, conclusions and arguments on health care problems and related issues to specialists and non-specialists clearly and unambiguously.
- PLO27 – Communication freely in the state language and English, both orally and in writing to discuss professional activities, research and projects.
- PLO30 – Determination of the management tactics of person's subject to dispensary supervision (children, pregnant women, workers whose professions require mandatory dispensary examination).

Expected learning outcomes. As a result of studying the academic discipline, the applicant of the higher education must:

Know: An algorithm for providing emergency medical aid for bleeding, drowning, thermal burns, poisoning, and animal and insect bites. Algorithm for providing medical care in acute renal and hepatic failure.

Be able:

- Provide emergency medical care for bleeding with subsequent stopping of bleeding on the manikin.
- Carry out measures to restore the patency of the respiratory tract on the dummy.
- Conduct cardiopulmonary resuscitation on a Simulator.
- Provide emergency medical care to a child with thermal injury.
- Provide emergency medical care for various types of acute poisoning according to the algorithm.
- Perform gastric lavage on a dummy.

- Provide emergency medical care for bites from domestic and wild animals, ticks and insects, poisonous snakes and spiders.
- Conduct clinical examination of children different ages according to standard methods.
- Analyze the results of laboratory, functional and instrumental research.
- Carry out differential diagnosis and substantiate the clinical diagnosis.
- Determine the tactics and provide emergency medical care in emergency situations in children.
- Determine the nature and principles treatment the sick children on the basis of a preliminary clinical diagnosis, observing the relevant ethical and legal norms, by making a reasoned decision according to existing algorithms and standard schemes.
- Perform medical manipulations (according to list 5) for common diseases in children.
- Keep medical records for common diseases in children

3. Content of elective discipline

Emergency pediatric care for bleeding, accidents and poisoning . Practicing practical skills on simulation equipment

Topic No. 1 Emergency medical care, bleeding . Etiology, pathogenesis, clinic, diagnosis. Changes in the body during bleeding. The main types of bleeding (nasal, oral, pulmonary, gastrointestinal, urinary tract, acute blood loss). Indicators of hemodynamics in normal and pathological conditions. Pediatric trauma assessment scale.

Topic No. 2 Algorithm for providing emergency medical care for bleeding. Practicing the skills of stopping bleeding on a dummy.

Topic #3 Emergency medical care, accidents. Drowning. Causes, mechanism of development and emergency aid algorithm. Practicing cardiopulmonary resuscitation skills on a Simulator.

Topic No. 4 Burns and electric shock. Types of burns. Damage severity index. Emergency care for a child with heat damage. Methods of anesthetizing the patient. Peculiarities of the caveat when providing assistance.

Topic No. 5 Emergency medical care, poisoning and animal bites.

Poisoning. Etiology, pathogenesis, clinic. Drug overdose. Types of intoxications and periods of poisoning. Antidote therapy. Algorithm of emergency medical care for various types of acute poisoning.

Topic No. 6 Emergency medical care, poisoning and animal bites.

Animal and insect bites. Etiology of bites (domestic and wild animals, ticks and insects, bites of poisonous snakes and spiders). Geographic distribution of poisonous animals on the territory of Ukraine. Principles of providing emergency care.

Topic #7 Emergency medical care, toxic emergencies.

Etiology, pathogenesis, clinic, diagnosis of acute renal failure in children. Principles of management and treatment of children with acute renal failure.

Topic #8 Acute liver failure. Diagnosis, differential diagnosis and treatment of acute liver failure.

4. The structure of the academic discipline

Names of topics	Number of hours					
	That's all	including				
		Lectures	seminars	practical	laboratory	SRS
Content module 1. Dispensary care for healthy and sick children in outpatient settings.						
Emergency care for major emergencies						
Topic 1. Emergency medical care, bleeding . Etiology, pathogenesis, clinic, diagnosis. The main	6	0	2	0	0	4

types of bleeding (nasal, oral, pulmonary, gastrointestinal, urinary tract, acute blood loss). Indicators of hemodynamics in normal and pathological conditions. Pediatric trauma assessment scale.						
<p>Topic 2.</p> <p>Algorithm for providing emergency medical care for bleeding.</p> <p>Practicing the skills of stopping bleeding on a dummy. Practicing the skills of vascular access (intraosseous, intravenous) on a simulation dummy.</p>	6	0	2	0	0	4
<p>Topic 3.</p> <p>Emergency medical assistance, accidents.</p> <p>Drowning. Causes, mechanism of development and emergency aid algorithm. Practicing cardiopulmonary resuscitation skills on a simulation simulator.</p>	6	0	2	0	0	4
<p>Topic 4.</p> <p>Burns and electric shock.</p> <p>Types of burns. Damage severity index. Emergency care for a child with heat damage. Methods of anesthetizing the patient. Peculiarities of the caveat when providing assistance.</p>	6	0	2	0	0	4
<p>Topic 5.</p> <p>Emergency medical care, poisoning.</p> <p>Poisoning. Etiology, pathogenesis, clinic. Drug overdose. Types of intoxications and periods of poisoning. Antidote therapy. Algorithm of emergency medical care for various types of acute poisoning.</p>	6	0	2	0	0	4
Topic 6.	6	0	2	0	0	4

Emergency medical care, animal and insect bites. Animal and insect bites. Etiology of bites (domestic and wild animals, ticks and insects, bites of poisonous snakes and spiders). Geographic distribution of poisonous animals, ticks, insects, snakes, spiders on the territory of Ukraine. Principles of providing emergency care.						
Topic 7. Emergency medical care, toxic emergencies. Etiology, pathogenesis, clinic, diagnosis of acute renal failure in children. Principles of management and treatment of children with acute renal failure.	5	0	2	0	0	3
Topic 8. Acute liver failure. Diagnosis, differential diagnosis and treatment of acute liver failure	4	0	2	0	0	2
<i>Together according to content module 1</i>	45	0	16	0	0	29
<i>Individual tasks</i>	0	0	0	0	0	0
Only hours	45	0	16	0	0	29

5. Lecture / seminar / practical topics / laboratory classes

5.1. Topics of lectures - not provided.

5.2. Seminar topics classes

No	Topic	How many hours
1.	Topic 1. Emergency medical care, bleeding. Etiology, pathogenesis, clinic, diagnosis. The main types of bleeding (nasal, oral, pulmonary, gastrointestinal, urinary tract, acute blood loss). Indicators of hemodynamics in normal and pathological conditions. Pediatric trauma assessment scale.	2
2.	Topic 2. Algorithm for providing emergency medical care for bleeding. Practicing the skills of stopping bleeding on a dummy. Practicing the skills of vascular access (intraosseous, intravenous) on a simulation dummy.	2
3.	Topic 3. Emergency medical assistance, accidents. Drowning. Causes, mechanism of development and emergency aid algorithm. Practicing cardiopulmonary resuscitation skills on a simulation simulator..	2
4.	Topic 4 Burns and electric shock. Types of burns. Damage severity index.	2

	Emergency care for a child with heat damage. Methods of anesthetizing the patient. Peculiarities of the caveat when providing assistance.	
5.	Topic 5 Emergency medical care, poisoning. Poisoning. Etiology, pathogenesis, clinic. Drug overdose. Types of intoxications and periods of poisoning. Antidote therapy. Algorithm of emergency medical care for various types of acute poisoning.	2
6.	Topic 6. Emergency medical care, animal and insect bites. Animal and insect bites. Etiology of bites (domestic and wild animals, ticks and insects, bites of poisonous snakes and spiders). Geographic distribution of poisonous animals, ticks, insects, snakes, spiders on the territory of Ukraine. Principles of providing emergency care.	2
7.	Topic 7. Emergency medical care, toxic emergencies. Etiology, pathogenesis, clinic, diagnosis of acute renal failure in children. Principles of management and treatment of children with acute renal failure.	2
8.	Topic 8. Acute liver failure. Diagnosis, differential diagnosis and treatment of acute liver failure..	2
	In total	16

5.3 Topics of practical classes are not provided

6. Independent work of the acquirer higher education

No h/p	Types of SRS	Number of hours
1	Preparation for the seminar class: Emergency medical care, bleeding. Etiology, pathogenesis, clinic, diagnosis. The main types of bleeding (nasal, oral, pulmonary, gastrointestinal, urinary tract, acute blood loss). Indicators of hemodynamics in normal and pathological conditions. Pediatric trauma assessment scale.	4
2	Preparation for the seminar class: . Algorithm for providing emergency medical care for bleeding. Practicing the skills of stopping bleeding on a dummy. Practicing the skills of vascular access (intraosseous, intravenous) on a simulation mannequin.	4
3	Preparation for the seminar class: Emergency medical care, accidents. Drowning. Causes, mechanism of development and emergency aid algorithm. Practicing cardiopulmonary resuscitation skills on a simulation simulator.	4
4	Preparation for the seminar class: Burns and electric shock. Types of burns. Damage severity index. Emergency care for a child with heat damage. Methods of anesthetizing the patient. Peculiarities of the caveat when providing assistance.	4
5	Preparation for the seminar class: Emergency medical care, poisoning. Poisoning. Etiology, pathogenesis, clinic. Drug overdose. Types of intoxications and periods of poisoning. Antidote therapy. Algorithm of emergency medical care for various types of acute poisoning.	4
6	Preparation for the seminar class: Emergency medical care, animal and insect bites. Animal and insect bites. Etiology of bites (domestic and wild animals, ticks and insects, bites of poisonous snakes and spiders). Geographic distribution of poisonous animals, ticks, insects, snakes, spiders on the territory of Ukraine. Principles of providing emergency care.	4
7	Preparation for the seminar class: Emergency medical care, toxic emergencies. Etiology, pathogenesis, clinic, diagnosis of acute renal failure	3

	in children. Principles of management and treatment of children with acute renal failure.	
8	Preparation for the seminar class: Acute liver failure. Diagnosis, differential diagnosis and treatment of acute liver failure.	2
	In total	29

7. Teaching methods

Seminar classes: discussion of theoretical issues, frontal survey on basic terminology, testing, role-playing games for mastering the skills of providing emergency aid for bleeding, accidents and poisoning in children (work in a team).

Independent work: mastering the topic of seminar on emergency care for bleeding, accidents and poisoning in children .

8. Forms of control and assessment methods (including criteria assessment results training)

Current control: assessment of mastery of practical communication skills with a sick child and his parents, appointment of additional examinations and assessment of their results, determination of management tactics and provision of emergency aid in case of bleeding, accidents and poisoning in children during role play. Test control.

Final control: test.

The structure of the current assessment at the seminar session

- Evaluation of compliance with the communication algorithm during the role-playing game;
- the maximum score is 5, the minimum score is 3, the unsatisfactory score is 2 .
- Assessment of the purpose of additional examination methods and their interpretation
- maximum score – 5, minimum score – 3, unsatisfactory score – 2 ;
- Assessment of the justification of the preliminary or clinical diagnosis and determination of patient management tactics.
- maximum score – 5, minimum score – 3, unsatisfactory score – 2 ;

The grade for the lesson is the arithmetic average of all components and can only have an integer value, namely 5, 4, 3, 2.

Current assessment criteria for the seminar session:

Excellent "5"	The applicant is fluent in the material, actively participates in role-playing, discussing and solving a situational clinical problem, confidently demonstrates practical skills during the examination of a sick child and the interpretation of clinical, laboratory and instrumental research data, expresses his opinion on the subject of the lesson, demonstrates clinical thinking.
Good "4"	The applicant has a good command of the material, participates in a role-play, discussion and solution of a situational clinical problem, demonstrates practical skills during the examination of a sick child and the interpretation of clinical, laboratory and instrumental research data with some errors, expresses his opinion on the subject of the lesson, demonstrates clinical thinking.
Satisfactorily "3"	The applicant does not have sufficient knowledge of the material, is unsure of participating in a role-play, discussing and solving a situational clinical problem, demonstrates practical skills during the examination of a sick child and the

	interpretation of clinical, laboratory and instrumental research data with significant errors.
Unsatisfactorily "2"	The applicant does not possess the material, does not take part in the role-play, discussion and solution of the situational clinical problem, does not demonstrate practical skills during the examination of a sick child and the interpretation of clinical, laboratory and instrumental research data.

9. Distribution of points received by students of higher education

The applicant is credited with a selective discipline, provided that there is no academic debt and an average current grade of at least 3.0.

10. Methodological support:

- The working program of a selective academic discipline
- Syllabus of selective educational discipline
- Textbooks:
- **Nelson textbook** of pediatrics, 2 volume set. **Edition** : **21** st, 2019. PDF format. <http://pediacalls.com/e-books/nelson-textbook-of-pediatrics-21st-edition/>
- Multimedia presentations
- Test tasks
- Methodical development of seminar classes

14. Recommended literature

Main:

1. Pediatrics. Differential diagnosis. Emergencies , edited by M.L. Aryaev , N.V. Kotova, electronic edition on compact disc. ONMedU . 2017.
2. Pediatrics. Differential diagnosis. Emergency situations. M.L.Aryaev , N.V.Kotova , O.O. Zelinsky [etc.]; edited by M.L. Aryaeva , N.V. Kotova. Odesa: ONMedU . 2017. 280 p.
3. **Nelson textbook** of pediatrics, 2 volume set. **Edition** : **21** st, 2019. PDF format. <http://pediacalls.com/e-books/nelson-textbook-of-pediatrics-21st-edition/>

Additional:

1. Emergency medical aid: new clinical protocol (Order of the MOH of Ukraine from 06.05.2019 no. 1269).
2. Order of the Ministry of Health of Ukraine of December 30, 2015 No. 916 Unified clinical protocol of emergency, primary, secondary (specialized) and tertiary (highly specialized) medical care for drug allergy, including anaphylaxis, is valid.

15. Electronic information resources

1. <https://www.pediatrics.od.ua/>
2. <http://moz.gov.ua> – Ministry of Health of Ukraine
3. www.ama-assn.org - American Medical Association / American Medical Association
4. www.oapn.od.ua - NGO "Odesa Association of Pediatricians and Neonatologists"
5. www.who.int - World Health Organization
6. www.dec.gov.ua/mtd/home/ - State Expert Center of the Ministry of Health of Ukraine
7. <http://bma.org.uk> - British Medical Association
8. www.gmc-uk.org - *General Medical Council (GMC)*

9. www.bundesaerztekammer.de – German Medical Association
10. https://www.who.int/workforcealliance/members_partners/member_list/ipa/en/ - International Pediatric Association (IPA)
11. <http://pediacalls.com/e-books/nelson-textbook-of-pediatrics-21st-edition/>