

MINISTRY OF HEALTH OF UKRAINE
ODESA NATIONAL MEDICAL UNIVERSITY

Department of simulation medical technologies



CONFIRMED by
Vice-rector for scientific and pedagogical work

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September 1, 2023

WORKING PROGRAM OF THE ACADEMIC DISCIPLINE
«NURSING PRACTICE. SIMULATION TRAINING»

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

Field of knowledge: 22 "Health care"

Specialty: 222 "Medicine"

Educational and professional program: Medicine

2023

The working program is compiled on the basis of the educational and professional program "Medicine" for the training of specialists of the second (master 's degree) level of higher education in the specialty 222 "Medicine" of the field of knowledge 22 "Health care", approved by the Academic Council of ONMedU (protocol No. 8 of 29.06.2023).

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The working program was approved at the meeting of the department of simulation medical technologies


Protocol No. 1 of 28.08.2023

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Approved by the subject-cycle methodological commission for surgical disciplines of ONMedU
Protocol No. 1 dated 30.08.2023

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Revised and approved at the meeting of the department of simulation medical technologies
Protocol No. __ dated __/__/20__ .

Head of the department _____

Revised and approved at the meeting of the department of simulation medical technologies
Protocol No. __ dated __/__/20__ .

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1. Description of the educational discipline:

Name of indicators	Field of knowledge, specialty, specialization, level of higher education	Characteristics of the academic discipline
The total number of: Credits of ECTS: 3 Hours: 90	Field of knowledge 22 "Health care"	<i>Full-time (day) education — elective discipline</i>
		<i>Course: 3</i>
	Specialty 222 "Medicine"	<i>Semesters V — VI</i>
		<i>Lectures (0 hours)</i>
	Level of higher education second (master's degree)	<i>Seminars (0 hours)</i>
		<i>Practical classes (30 hours)</i>
		<i>Laboratories (0 hours)</i>
		<i>Individual work (60 hours)</i>
		<i>including individual tasks (0 hours)</i>
	<i>Final control form — test</i>	

2. The aim and tasks of the academic discipline, competencies, program learning outcomes

Aim: formation of relevant competencies and mastery of skills in organization of regime and care for patients with various diseases of therapeutic and surgical profile, healthy and sick children. Improvement of manipulation skills and competences acquired during the study of previous disciplines. Mastering by students of the basic techniques of the professional activity of a nurse based on deep knowledge and understanding of the peculiarities of the functioning of a sick person's body in compliance with the principles of medical ethics and deontology.

Task:

1. Formation and assimilation of practical skills of a nurse in the surgical and therapeutic departments of a hospital.
2. Deepening of theoretical knowledge and improvement of competencies to ensure favorable and comfortable conditions of stay in the hospital in the most frequent cases that occur in the hospitals of departments of internal medicine, pediatrics and surgical profile, and providing the necessary care for them.
3. Mastering the basic practical skills of a nurse, the ability to apply methods of management and prevention of complications in the treatment of various diseases that occur in hospitals of the departments of internal medicine, pediatrics and surgical profile.
4. Improvement of moral and ethical and deontological qualities of students in the implementation of patient care measures.

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
- 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 informed decisions
- GC7. Ability to work in a team
- GC8. Ability to interpersonal interaction

GC12. Determination and persistence in relation to assigned tasks and assumed responsibilities
GC13. Awareness of equal opportunities and gender issues
GC16. The ability to evaluate and ensure the quality of the work performed

• **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
SC7. Ability to diagnose emergency conditions
SC8. Ability to determine tactics and provide emergency medical care
SC9. Ability to carry out medical evacuation measures
SC10. Ability to perform medical manipulations
SC13. Ability to carry out sanitary and hygienic and preventive measures
SC16. Ability to maintain medical documentation, including electronic forms
SC24. Adherence to ethical principles when working with patients and laboratory animals

Program learning outcomes (PLO):

PLO1. Have thorough knowledge of the structure of professional activity. To be 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
PLO17. Perform medical manipulations (according to list 5) in the conditions of a medical institution, at home or at work on the basis of a previous clinical diagnosis and/or indicators of the patient's condition by making a reasoned decision, observing the relevant ethical and legal norms
PLO24. To organize the required level of individual safety (own and the persons he cares for) in case of typical dangerous situations in the individual field of activity

As a result of studying the academic discipline, the student of higher education must:

To know:

- Anatomical structure of organs and systems in adults and children of different ages
- Basics of organizing a rational regimen and treatment in a surgical hospital
- Basics of organizing a rational regime and treatment in departments of therapeutic and pediatric profile
- Perform medical manipulations that are part of the functional duties of a nurse in the conditions of a medical institution, using knowledge about a person, his organs and systems, observing the relevant ethical and legal norms
- Theoretical foundations of modern antiseptics
- General issues of surgical infection, HIV and hepatitis
- Theoretical aspects of dressing material and methods of its application
- Provide emergency medical care, under any circumstances, using knowledge about a person, his organs and systems, observing the relevant ethical and legal norms, by making a reasoned decision, based on the detection of an emergency condition in a limited time according to the defined tactics, using standard schemes
- To ensure compliance with the necessary therapeutic nutrition during the treatment of the disease, in the conditions of a health care institution, using knowledge about a person, his organs and systems, observing the relevant ethical and legal norms, by making a reasoned decision according to existing algorithms and standard schemes
- Principles of medical ethics
- Concepts, indications, contraindications, technique, algorithm and complications of manipulations:
 1. temporary stoppage of external bleeding
 2. primary surgical treatment of the wound, bandaging, removal of skin sutures, in

- particular in field conditions
- 3. applying a bandage, incl. in field conditions
- 4. transport immobilization
- 5. administration of medicinal substances (intravenous jet and drip, intraosseous), in particular in field conditions
- 6. provision of peripheral venous and intraosseous access
- 7. bladder catheterization with a soft probe

Be able to:

- Orientate yourself in the anatomical structure of organs and systems in adults and children of different ages
- Be able to analyze the patient's general condition
- Name pathological changes in human organs and systems
- Determine the sequence of actions when providing assistance
- Perform the necessary manipulations: temporary stoppage of external bleeding, primary surgical treatment of the wound, bandaging, removal of skin sutures, application of a bandage, transport immobilization, provision of peripheral venous and intraosseous access, determination of blood group, Rh status
- Monitor the patient's condition after performing practical skills
- Solve deontological tasks related to professional activity
- Have professional communication skills

3. Content of the academic discipline

Topic 1. Bleeding and blood loss. Types of haemostasis. Stopping external bleeding from the limbs, trunk and head

Bleeding: concepts, types. Methods of determining blood loss. Methods of temporary stopping of bleeding: finger pressure, pressure bandage, twists, tourniquet. Methods of definitive stopping of bleeding: mechanical, physical, biological. Features of the application of various methods of stopping bleeding. The concept of blood groups and Rhesus. Methods of blood group and Rh factor determination. General rules of blood transfusion. List of studies that performed before hemotransfusion. Method of determination of individual, rhesus and biological compatibility of donor and recipient blood. Determination of macroscopic qualities of donor blood. Methodology of hemotransfusion, monitoring of the patient during the procedure. Prevention of complications during hemotransfusion.

Topic 2. Traumatism and damage. Desmurgy

The concept of traumatism. Clinical manifestations of closed injury of soft tissues, skull, thorax, organs of the abdominal cavity. Prevention of the development of traumatic shock, pneumothorax, internal bleeding. Peculiarities of providing first aid and transporting patients with these injuries. Transport immobilization: application of Kramer, Dieterichs splints. Types of wounds. Providing first aid to victims with cut and bruised wounds. Organization of primary surgical treatment of the wound. Types of primary suture depending on the type and location of the wound. The role of a nurse in the organization of surgical treatment of a purulent wound. Types of secondary seams. The structure of clean and purulent dressings, the organization of a sanitary and hygienic regime in them. The technique of washing drainage tubes, replacing drains in a patient with a purulent wound, applying ointment bandages. Antiseptic preparations for washing purulent wounds. The technique of bandaging a patient with a clean (operative) wound.

Abdominal drainage drainage technique. Preparation of tools for venesection, tracheostomy, pleural puncture, laparocentesis.

Topic 3. Surgical infection. Aseptic and antiseptic bandages. Postoperative wound treatment

Surgical infection. Aseptic and antiseptic bandages. Postoperative wound treatment.

Topic 4. Ways and methods of administration of medicines

Intradermal, subcutaneous, intramuscular, intravenous injections, intravenous drip infusions: concepts, indications, contraindications, technique, algorithm and complications of manipulations.

Topic 5. Technique of injections in children and adults. Peculiarities of providing intravenous access in patients with varicose veins

The technique of performing intradermal, subcutaneous, intramuscular, intravenous injections, intravenous drip infusions. Calculation of the dose of the soluble form of the drug for injections.

Topic 6. Bladder catheterization technique in adults and children of different ages

Catheterization of the urinary bladder in adults and children of different ages: concepts, indications, contraindications, technique, algorithm and complications of manipulations.

Topic 7. Stomach probing. Tubage: indications, contraindications, performance technique

Stomach probing: concepts, indications, contraindications, technique, algorithm and complications of manipulations.

Topic 8. Final lesson

4. The structure of the academic discipline

Names of topics	Number of hours					
	Total	including				
		lectures	seminars	practical classes	laboratories	Individual work
Topic 1. Bleeding and blood loss. Types of haemostasis. Stopping external bleeding from the limbs, trunk and head	14	0	0	6	0	8
Topic 2. Traumatism and damage. Desmurgy	14	0	0	6	0	8

Topic 3. Surgical infection. Aseptic and antiseptic bandages. Postoperative wound treatment	10	0	0	2	0	8
Topic 4. Ways and methods of administration of medicines	10	0	0	2	0	8
Topic 5. Technique of injections in children and adults. Peculiarities of providing intravenous access in patients with varicose veins	12	0	0	4	0	8
Topic 6. Bladder catheterization technique in adults and children of different ages	12	0	0	4	0	8
Topic 7. Stomach probing. Tubage: indications, contraindications, performance technique	12	0	0	4	0	8
Topic 8. Final lesson	6	0	0	2	0	4
Total hours	90	0	0	30	0	60

5. Topics of lectures/ seminars/ practical classes / laboratories

5.1. Topics of lectures

Lectures are not provided.

5.2. Topics of seminar classes

Seminar classes are not provided.

5.3. Topics of practical classes

№	Topic	Hours
1.	Topic 1. Practical lesson 1. Bleeding and blood loss. Types of haemostasis. Stopping external bleeding from the limbs, trunk and head	2
2.	Topic 1. Practical lesson 2. Bleeding and blood loss. Types of haemostasis. Stopping external bleeding from the limbs, trunk and head	2
3.	Topic 1. Practical lesson 3. Bleeding and blood loss. Types of haemostasis. Stopping external bleeding from the limbs, trunk and head	2
4.	Topic 2. Practical lesson 4. Traumatism and damage. Desmurgy	2
5.	Topic 2. Practical lesson 5. Traumatism and damage. Desmurgy	2
6.	Topic 2. Practical lesson 6. Traumatism and damage. Desmurgy	2
7.	Topic 3. Practical lesson 7. Surgical infection. Aseptic and antiseptic bandages. Postoperative wound treatment	2
8.	Topic 4. Practical lesson 8. Ways and methods of administration of medicines	2
9.	Topic 5. Practical lesson 9. Technique of injections in children and adults. Peculiarities of providing intravenous access in patients with varicose veins	2
10.	Topic 5. Practical lesson 10. Technique of injections in children and adults. Peculiarities of providing intravenous access in patients with varicose veins	2
11.	Topic 6. Practical lesson 11. Bladder catheterization technique in adults and children of different ages	2
12.	Topic 6. Practical lesson 12. Bladder catheterization technique in adults and children of different ages	2
13.	Topic 7. Practical lesson 13. Stomach probing. Tubage: indications, contraindications, performance technique	2
14.	Topic 7. Practical lesson 14. Stomach probing. Tubage: indications, contraindications, performance technique	2
15.	Topic 5. Practical lesson 15. Final lesson	2
	Total	30

5.4. Topics of laboratories

Laboratories are not provided.

6. Individual work of the student

№	Topic	Hours
1.	Topic 1. Basic rules for preparing a patient for esophagogastroduodenoscopy, rectoromanoscopy, colonoscopy, irrigoscopy, radiography of the stomach, ultrasound of the organs of the abdominal cavity, retroperitoneal space and pelvis	15
2.	Topic 2. Basic rules for disinfection and pre-sterilization cleaning of instruments. Sterilization of instruments for multiple use. Quality control of pre-sterilization cleaning of instruments for the presence of blood and detergents	15
3.	Topic 3. Basic rules for supplying humidified oxygen and using an oxygen pillow. Basic rules for using inhalers	15
4.	Preparation for practical classes	15
	Total	60

7. Teaching methods

Practical classes: conversation, role-playing, solving clinical situational problems, practicing and controlling practical skills on simulation models and mannequins (according to list 5), passing simulation scenarios, solving test tasks.

Individual work: individual work with the recommended basic and additional literature, electronic information resources, individual work with the bank of Step-1 test tasks, preparation for practical classes.

8. Forms of control and evaluation methods (including criteria for evaluating learning outcomes)

Ongoing control: oral survey, testing, assessment of performance of practical skills on simulation models and mannequins, assessment of communication skills during simulation scenarios, solution of situational clinical tasks, assessment of activity in class.

Final control: test.

Evaluation of the current educational activity in a 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.
 3. Evaluation of work with a patient simulator on the subject of the lesson:
 - methods: assessment of: a) communicative skills of communicating with a patient simulator; b) correctness of appointment and assessment of laboratory and instrumental studies; c) compliance with the differential diagnosis algorithm; d) substantiation of the clinical diagnosis; e) drawing up a treatment plan;
 - the maximum score is 5, the minimum score is 3, the unsatisfactory score is 2.
- The grade for one practical session is the arithmetic average of all components and can

only have a whole value (5, 4, 3, 2), which is rounded according to the statistical method.

Criteria of ongoing assessment at the practical class

Rating	Evaluation criteria
Excellent "5"	The applicant takes an active part in the lesson; demonstrates deep knowledge, gives complete and detailed answers to questions. Thoroughly and comprehensively knows the content of theoretical issues, fluent in professional and scientific terminology. Thinks logically and constructs an answer, freely uses acquired theoretical knowledge when analyzing practical tasks. When solving a clinical problem, he correctly interprets the anamnesis data, the results of clinical, laboratory and instrumental studies, correctly answers all the questions and convincingly substantiates his point of view, can propose and justify an alternative version of the decision on individual issues. When solving a practical task according to the OSCE type, he correctly demonstrates the performance of practical skills on simulation models and mannequins, strictly adheres to the algorithm of their implementation
Good "4"	The acquirer participates in the class; knows the material well; demonstrates the necessary knowledge, but answers the questions with some errors. He knows the content of theoretical issues deeply and comprehensively, and has professional and scientific terminology. Thinks logically and constructs an answer, uses acquired theoretical knowledge when analyzing practical tasks. But when teaching some questions, there is not enough depth and argumentation, it makes insignificant mistakes, which are eliminated by the student himself when the teacher points them out. When solving a clinical problem, minor errors or inaccuracies are assumed in the interpretation of anamnesis data, results of clinical, laboratory and instrumental studies, he answers all the questions without significant errors, fully substantiates his point of view, but proposals for an alternative option cause difficulties. When solving a practical task according to the OSCE type, minor errors in the algorithm and technique of performing skills on simulation models and mannequins are corrected at the instruction of the teacher
Satisfactory "3"	The acquirer sometimes participates in the activity; partially speaks and asks questions; makes mistakes when answering questions. Possesses a basic amount of theoretical knowledge, uses professional and scientific terminology inaccurately. Experiences significant difficulties in constructing an independent logical answer, in applying theoretical knowledge in the analysis of practical tasks. There are significant errors in the answers. When solving a clinical problem, he interprets the history data, the results of clinical, laboratory and instrumental studies with errors, does not know individual details, allows inaccuracies in the answers to questions, does not adequately justify his answers and interprets the wording, experiences difficulties in completing tasks and proposing alternative options. When solving a practical task according to the OSCE type, significant errors are assumed in the algorithm and technique of performing skills on simulation models and mannequins
Unsatisfactory "2"	The acquirer does not participate in the lesson, is only an observer; never speaks or asks questions, disinterested in learning the material; gives incorrect answers to questions. Has not mastered the basic amount of theoretical knowledge, shows a low level of mastery of professional and scientific terminology. Answers to questions are fragmentary, inconsistent, illogical, cannot apply

	theoretical knowledge when analyzing practical tasks. There are a significant number of gross errors in the answers. When solving a clinical problem, he cannot interpret the received history data, the results of clinical, laboratory and instrumental studies, answer the questions, or makes significant mistakes in the answers; could not justify his decisions or does it unconvincingly. It does not offer alternative options. When solving a practical task according to the OSCE type, gross errors and errors in the algorithm and technique of performing skills on simulation models and mannequins will not be demonstrated or assumed
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Test is given to the applicant who completed all tasks of the work program of the academic discipline, took an active part in practical classes, completed and defended an individual assignment and has an average current grade of at least 3.0 and has no academic debt.

Test is carried out: at the last lesson before the beginning of the examination session — at ribbon system teaching, on to the last occupation — with a cyclical system of education. The test score is the arithmetic mean of all components on a traditional four-point scale and has a value that is rounded using the statistical method with two decimal places after the decimal point.

9. Distribution of points, obtained by the students

The obtained average score for the academic discipline for applicants who have successfully mastered the work program of the academic discipline is converted from a traditional four-point scale to points on a 200-point scale, as shown in the table:

Conversion table of a traditional to multi-point scale

National score for the discipline	The sum of scores for the discipline
Excellent ("5")	185 – 200
Good ("4")	151 – 184
Satisfactory ("3")	120 – 150
Unsatisfactory ("2")	Less than 120

Multi-point scale (200-point scale) characterizes the actual success rate of each applicant in mastering the educational component. The conversion of the traditional grade (average score for the academic discipline) into a 200-point grade is performed by the information and technical department of the University.

According to the obtained points on a 200-point scale, the achievements of the applicants are evaluated according to the ECTS rating scale. Further ranking according to the ECTS rating scale allows you to evaluate the achievements of students from the educational component who are studying in the same course of the same specialty, according to the points they received.

The ECTS scale is a relative-comparative rating, which establishes the applicant's belonging to the group of better or worse among the reference group of fellow students (faculty, specialty). An "A" grade on the ECTS scale cannot be equal to an "excellent" grade, a "B" grade to a "good" grade, etc. When converting from a multi-point scale, the limits of grades "A", "B", "C", "D", "E" according to the ECTS scale do not coincide with the limits of grades "5", "4", "3" according to the traditional scale. Acquirers who have received grades of "FX" and "F" ("2") are not included in the list of ranked acquirers. The grade "FX" is awarded to students who have obtained the minimum number of points for the current learning activity, but who have not passed the final examination. A grade of "F" is given to students who have attended all classes in the discipline, but have not achieved a grade point average (3.00) for the current academic activity and are not admitted to the final examination.

Applicants who study in one course (one specialty), based on the number of points scored in the discipline, are ranked on the ECTS scale as follows:

Conversion of the traditional evaluation and ECTS scores scale

Score on the ECTS scale	Statistical indicator
A	The best 10% students
B	Next 25% students
C	Next 30% students
D	Next 25% students
E	Next 10% students

10. Methodological support

- Working program of the academic discipline
- Syllabus
- Methodological recommendations for the practical classes in the discipline
- Methodological recommendations for the individual work of students
- Simulation scenarios
- Mannequins and simulators

11. Questions for the final control

The list of practical skills that are learned during the study of the discipline (according to list 5):

1. temporary stoppage of external bleeding
2. primary surgical treatment of the wound, bandaging, removal of skin sutures, in particular in field conditions
3. applying a bandage, incl. in field conditions
4. transport immobilization
5. administration of medicinal substances (intravenous jet and drip, intraosseous), in particular in field conditions
6. provision of peripheral venous and intraosseous access
7. bladder catheterization with a soft probe

12. Recommended literature

Main:

1. Patient care and nursing: study guide / O.O. Yakymenko; edited by Yakymenko O.O., 2021 — 178 p.
2. Nursing in internal medicine/ O.S. Stasyshyn, V.V. Stasiuk, I.M. Bandura et al., K.: VSV —Medytsina, — 2019. - 496 p.
3. Basics of nursing: / V.M. Lisovyi, L.P. Olkhovska, V.A. Kapustnyk// K.: VSV — Medicine, 2018. - 912 p.
4. Basics of nursing in modules: study guide / N.M. Kasevich — 3rd ed., edition// K.: VSV —Medytsina, 2018. — 480 p.

Additional:

1. Nursing: a textbook (university I-III years) / N.M. Kasevich, I.O. Petryashev, V.V. Slipchenko and others; under the editorship V.I. Lytvynenko — 3rd ed., edition// K.: VSV —Medytsina, 2017. - 816 p.
2. Care for patients. Practice. Textbook / O. M. Kovalova, V. M. Lisovyi, S. I. Shevchenko, T. V. Frolova. - Kyiv: Medicine, 2013. - 488 p.

13. Electronic information resources

1. <http://moz.gov.ua> — Ministry of Health of Ukraine
2. www.who.int — World Health Organization
3. <http://www.nbu.gov.ua/> — National Library of Ukraine
4. <https://gmka.org/uk/category/dlya-medykiv/nevidkladna-hirugiya/> — Global Alliance for Medical Knowledge
5. Order of the Ministry of Health of Ukraine No. 460 dated 01.06.13 On the approval of protocols of a nurse (paramedic, midwife) for patient care and the performance of basic medical procedures and manipulations. [electronic resource] — Access mode: <http://mozdocs.kiev.ua>
6. Order of the Ministry of Health No. 149 of March 20, 2008 "On approval of the clinical protocol for medical care of a healthy child under the age of 3" [electronic resource] — Access mode: <http://mozdocs.kiev.ua>
7. Order of the Ministry of Health of Ukraine No. 152 dated 04/04/2005 "On approval of the Protocol of medical care for a healthy newborn child". [electronic resource] — Access mode: <http://mozdocs.kiev.ua>
8. Order of the Ministry of Health of Ukraine No. 798 dated 21.09.2010 On approval of methodological recommendations "Surgical and hygienic treatment of hands of medical personnel" [electronic resource]. — Access mode: <http://medsoft.ucoz.ua>
9. Order of the Ministry of Health of Ukraine No. 110 dated 14.02.2012 On the approval of the forms of primary accounting documentation and instructions for filling them out, which are used in health care institutions regardless of the form of ownership and subordination [electronic resource]. — Access mode: <http://medsoft.ucoz.ua>
10. Order of the Ministry of Health of Ukraine No. 223 of 10/22/1993 On the collection, disinfection and delivery of used single-use medical products made of plastic materials [electronic resource]. — Access mode: <http://medsoft.ucoz.ua>