

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE  
ODESA NATIONAL MEDICAL UNIVERSITY

APPROVED

by the Academic Council of Odessa  
National Medical University  
«29» June, 2023  
Record № 8

IMPLEMENTED

By order  
Of the Rector of  
Odessa National Medical University  
Valerii ZAPOROZHAN  
№ 553-О  
«29» June, 2023



EDUCATIONAL AND PROFESSIONAL PROGRAM

«MEDICINE»

FOR TRAINING OF SPECIALISTS AT THE SECOND (MASTER'S) LEVEL OF  
HIGHER EDUCATION

speciality 222	«Medicine»
branch of knowledge 22	«Health Care»
educational qualification	«Master of Medicine»
professional qualification	«Doctor»

## LETTER OF AGREEMENT

### WITH THE EDUCATIONAL AND PROFESSIONAL PROGRAM "MEDICINE"

#### 1. INTRODUCED:

- By the subject-cycle methodological commission for humanities - record No. 5 dated 22.05.2023
- By the subject-cycle methodological commission for medical and biological disciplines - record No. 6 dated 07.06.2023
- By the subject-cycle methodological commission for therapeutic disciplines - record No. 3 dated 23.05.2023
- By the subject-cycle methodological commission for surgical disciplines - record No. 6 dated 18.05.23
- By the subject-cycle methodological commission for pediatric disciplines - record No. 5 dated 17.05.2023
- By the subject-cycle methodological commission for special disciplines - minutes No. 5 dated 18.05.2023

2. **APPROVED** by the Central Qualification Methodical Council of Odesa National Medical University



Signature

Nina MATSEHORA

Surname, initials

Record No. 6 dated 28.06.2023

## PREFACE

Developed by the project group consisting of:

Guarantor of the educational and professional program: V. P. Marichereda – the first vice-rector of Odesa National Medical University, doctor of medicine, professor.

### **Project group:**

- V. I. Borshch – Doctor of Economic Sciences, Associate Professor, Vice-Rector for Prospective Development;
- E. S. Buriachivskiy – PhD in Medicine, Associate Professor, vice-rector for scientific and pedagogical work;
- S. G. Kotiuzhynska – doctor of medicine, professor, vice-rector for scientific and pedagogical work;
- Annenkova I. P. - doctor of pedagogy, associate professor, acting Head of the Educational Department;
- Petrovskiy Yu. Yu. - PhD in Medicine, head of the educational and production complex of innovative technologies of learning, informatization and continuous education;
- Usychenko K. M. - PhD in Medicine, Associate Professor, acting head of the Education Quality Assurance Department;
- Sikorska O. O. – PhD in Philology, Associate Professor, Head of the Department of Social Sciences;
- Tiron O.I. – Doctor of Medicine, Associate Professor, Head of the Department of Histology, Cytology and Embryology;
- Vastyanov R. S. - Doctor of Medicine, Professor, Head of the Department of General and Clinical Pathological Physiology;
- Honcharuk S. F. – Doctor of Medicine, Professor, Head of the Department of Clinical Immunology, Genetics and Medical Biology;
- Babienko V. V. - doctor of medicine, professor, head of the department of hygiene and medical ecology;
- Matsegora N. A. – Doctor of Medicine, Professor, Head of the Department of Phthysipulmonology;
- Voloshyna O. B. - Doctor of Medicine, Professor, Head of the Department of General Practice;
- Venher L.V. – Doctor of Medicine, Professor, Head of the Department of Ophthalmology;
- Kryzhanovskii V. V. – PhD in Medicine, Associate Professor, Head of the Department of Surgery No. 3;
- T. V. Stoeva - Doctor of Medicine, Professor, Head of the Department of Pediatrics No. 2;
- Rozhkovskii Ya. V. - Doctor of Medicine, Professor, Head of the Department of Pharmacology and Pharmacognosy;

- Volyanska A. G. – Doctor of Medicine, Professor of the Department of Obstetrics and Gynecology;
- Tikhonova S. A. – Doctor of Medicine, Professor of the Department of Internal Medicine No. 2;
- L. E. Kaplina – PhD in Medicine, Associate Professor of the Department of Pediatrics No. 1;
- Todorova T. P. – postgraduate student of the Department of Obstetrics and Gynecology;
- Ladyzhenska V. O. – a student in specialty "Medicine"; head of the student self-government of the Faculty of Medicine No. 1;
- Lysyuk V.Yu. - a student in specialty "Medicine", head of the student self-government of the medical faculty No. 2.

**The professional expertise of the educational and professional program was carried out by:**

- Yu. P. Vdovychenko – Doctor of Medicine, Professor, Corresponding Member of the National Academy of Medical Sciences of Ukraine, Honored Doctor of Ukraine, first vice-rector of the National University of Health Care of Ukraine named after P. L. Shupyk;
- 1. Gerush I. V. - Doctor of Medicine, Professor, Vice-Rector for Scientific and Pedagogical Work of Bukovyna State Medical University
- M. O. Avramenko – PhD in Pharmacy, Associate Professor, First Vice-Rector of Zaporizhzhia State Medical University;
- Kęstutis Petrikonis - professor, vice-rector for academic work of the Lithuanian University of Health Sciences (Kaunas, Lithuania);
- V. M. Haydukov - director of the Danube Regional Hospital of the Odesa Regional Council.

# 1. PROFILE OF THE EDUCATIONAL AND PROFESSIONAL PROGRAM IN SPECIALTY 222 "MEDICINE"

## 1.1. General Information

Full name of the institution of higher education	Odesa National Medical University
The degree of higher education and the title of the qualification in the original language	The degree of education – Master (the second degree of higher education) Educational qualification – Master of Medicine Professional qualification – Doctor Qualification in the diploma – Master of Medicine. Doctor
The official name of the educational and professional program	«Medicine»
Type of diploma and scope of the educational and professional program	Master's degree, single, 360 ECTS credits, training period 6 years Scope of the educational program: 1. On the basis of complete general secondary education - 360 ECTS credits 2. On the basis of a bachelor's degree, a junior bachelor's degree, a professional junior bachelor's degree or a junior specialist's degree in specialty 223 "Nursing", 5.12010101 "Medical Care", 5.12010102 "Nursing", 5.12010103 "Medical and Preventive Care", 5.12010105 "Obstetrics" – 300 ECTS credits (no more than 6 re-credits).
Availability of accreditation	Accreditation of the MES of Ukraine 01.07.2014 Accreditation of HAAP IAAR 23.12.2021
Cycle/level	NQF (National Qualification Framework) of Ukraine – 7 <sup>th</sup> level FQ-EHEA – second cycle EQF-LLL – 7 <sup>th</sup> level
Prerequisites	A person has the right to obtain a master's degree on the basis of a complete general secondary education based on the results of an external independent assessment. Admission based on the degree of "bachelor", "junior bachelor", "specialist junior bachelor" or the educational and qualification level of a junior specialist in the specialty 223 "Nursing" is carried out based on the results of external independent assessment and entrance exams at a higher education institution in subjects (disciplines) of which no external independent evaluation is conducted.  Conditions for admission are determined by the Rules of Admission to ONMedU.
Language(s)	Ukrainian, English
The term of validity of the educational and professional program	Till 2028
Internet address of the permanent placement of the description of the educational and professional program	<a href="https://onmedu.edu.ua/osvita/osvitni-programi/">https://onmedu.edu.ua/osvita/osvitni-programi/</a>

## 1.2. Purpose of the educational and professional program

Training of highly qualified specialists capable of solving complex tasks and problems in the field of health care, carrying out appropriate professional actions in the field of health care, conducting research and implementing innovations in conditions characterized by uncertainty and variability, continue learning with a high degree of autonomy

## 1.3. Characteristics of the educational and professional program

Subject area (field of knowledge, specialty, specialization)	Field of knowledge - 22 "Health care" Specialty - 222 "Medicine"
Description of the subject area	<p><i>The object of study:</i> prevention, diagnosis and treatment of human diseases, the impact of health problems on patients, their families and the population, health maintenance.</p> <p><i>Learning goals:</i> acquiring the ability to solve complex tasks and problems, including those of a research and innovation nature, in the field of medicine. Ability to continue learning with a high degree of autonomy.</p> <p><i>Theoretical content of the subject area:</i> concepts, principles and theories of prevention, diagnosis and treatment of human diseases at the individual, family and population levels.</p> <p><i>Methods, techniques and technologies:</i> anamnestic, clinical, laboratory, instrumental methods of carrying out the diagnostic process, determining the leading symptoms and syndromes, determining the preliminary and clinical diagnosis; technologies of diagnosis, treatment and prevention, management and organization of work in the field of health care.</p> <p><i>Tools and equipment:</i> modern diagnostic, therapeutic and other devices, objects and devices used in professional activities.</p>
Orientation of the educational and professional program	The educational and professional program is an applied program with a professional focus on the theory and practice of medicine.
The main focus of the educational and professional program and specialization	Special higher education in the field of knowledge 22 "Health care", specialty 222 "Medicine". Keywords: master's degree, medicine, health care, complete higher medical education.
Features of the program	Full-time education. The program is aimed at students acquiring competencies that are necessary for specialists in the field of health care, in particular family medicine, by combining theoretical and practical training with the use of innovative technologies, modern equipment (including simulation) on the basis of the university, clinical bases and health care institutions. The educational process is based on student-centered practical-oriented and competency-based approaches, in compliance with the principle of "lifelong learning" - continuous professional development. It is aimed at the formation of complex clinical thinking, practical and emotional intelligence in graduates for the effective implementation of

professional competencies.  
Taught in Ukrainian and English.

#### **1.4. Graduates' suitability for employment and further education**

Suitability for employment	After completing the education and professional program of the master's degree in the specialty "Medicine", the specialist is able to perform professional work: - Intern physician (PC code – 3229); - Trainee doctor (PC code -3221); - Resident doctor (PC code – XXX).
Further Education	A graduate of the program has the right to acquire additional qualifications and medical specializations in the adult education system by enrolling on postgraduate education programs (internship, clinical residency). After completing the internship, the specialist has the right to: 1) undergo specialization and perform the relevant professional work of a doctor of a certain specialty, which is specified in the current National Classifier of Ukraine; 2) to continue obtaining education at the third (educational and scientific) level of higher education; 3) to acquire another specialization, also to acquire additional qualifications in the system of postgraduate education, professional development according to the system of continuous professional development.

#### **1.5. Teaching and assessment**

Teaching and training	The basis for the organization of the educational process is a competency-based and student-centered approach. It is based on the principles of andragogy. The educational process is carried out using contextual, problem-oriented learning, modern information and communication technologies.  The main forms of organization of the educational process are: lectures, practical classes, independent work, consultations, curation of patients, industrial practices, cycles of simulation training.
Assessment	Control measures include diagnostic, current and final (semester) control. Forms of current control: classroom tests, test control, control of practical skills, case histories defense. Forms of final control: tests, differentiated tests, oral and written exams. Certification – USQE (Unified State Qualification Exam). Assessment principles: objectivity, planning, systematicity, unity of requirements, openness, transparency, economy, accessibility and comprehensibility of the assessment methodology, taking into account the individual capabilities of higher education applicants. Assessment and control of the learning results of higher education applicants is carried out in accordance with the Regulation "On the organization of the educational process at the Odesa National Medical University".

## 1.6. Program competencies

Integral competency of the master's degree ( level 7) according to the requirements of the NQF	Ability to solve typical and complex problems, including those of a research and innovation nature in the field of medicine. Ability to continue learning with a high degree of autonomy.
General competencies according to the requirements of the NQF	<p>GC1. Ability to abstract thinking, analysis and synthesis</p> <p>GC 2. Ability to learn and master modern knowledge</p> <p>GC 3. Ability to apply knowledge in practical situations</p> <p>GC 4. Knowledge and understanding of the subject area and understanding of professional activity</p> <p>GC 5. Ability to adapt and act in a new situation</p> <p>GC 6. Ability to make reasonable decisions</p> <p>GC 7. Ability to work in a team</p> <p>GC 8. Ability to interpersonal interaction</p> <p>GC 9. Ability to communicate in a foreign language</p> <p>GC 10. Ability to use information and communication technologies</p> <p>GC 11. Ability to search, process and analyze information from various sources</p> <p>GC 12. Determination and persistence in relation to assigned tasks and assumed responsibilities</p> <p>GC 13. Awareness of equal opportunities and gender issues</p> <p>GC 14. Ability to realize one's rights and responsibilities as a member of society, to be aware of 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</p> <p>GC 15. Ability to preserve and increase 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, technology and technologies, to use various types and forms of motor activity for active recreation and leading a healthy lifestyle</p> <p>GC 16. Ability to evaluate and ensure the quality of the work performed.</p> <p>GC 17. Desire to preserve the environment</p>
Special ( professional, subject ) competencies	<p>SC1. Ability to collect medical information about the patient and analyze clinical data</p> <p>SC 2. Ability to determine the necessary list of laboratory and instrumental studies and evaluate their results</p> <p>SC 3. Ability to establish a preliminary and clinical diagnosis of the disease</p> <p>SC 4. Ability to determine the necessary regime of work and rest in the treatment and prevention of diseases</p> <p>SC 5. Ability to determine the nature of nutrition in the treatment and prevention of diseases</p> <p>SC 6. Ability to determine the principles and nature of treatment and prevention of diseases</p>



SC 7. Ability to diagnose emergency conditions

SC 8. Ability to determine tactics and provide emergency medical care

SC 9. Ability to carry out medical evacuation measures

SC 10. Ability to perform medical manipulations

SC 11. 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

SC 12. Ability to determine the tactics of physiological pregnancy, physiological childbirth and the postpartum period. Family planning counselling skills and contraceptive method selection

SC 13. Ability to carry out sanitary and hygienic and preventive measures

SC 14. Ability to plan and carry out preventive and anti-epidemic measures for infectious diseases

SC 15. Ability to conduct an examination of working capacity

SC 16. Ability to fill medical documentation, including electronic forms

SC 17. Ability to assess the impact of the environment, socio-economic and biological determinants on the state of health of an individual, family, population

SC 18. Ability to analyze the activity of a doctor, unit, health care institution, ensure the quality of medical care and increase the efficiency of the use of medical resources

SC 19. Ability to organize and integrate the provision of medical assistance to the population and the marketing of medical services

SC 20. Ability to conduct epidemiological and medical statistical studies of the health of the population; processing of social, economic and medical information

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

SC 22. Ability to manage healthcare workflows that are complex, unpredictable and require new strategic approaches

SC 23. Ability to develop and implement scientific and applied projects in the field of health care

SC 24. Adherence to ethical principles when working with patients and laboratory animals

SC 25. Adherence to professional and academic integrity, being responsible for the reliability of the obtained scientific results

SC 26. Ability to determine the management tactics of persons subject to dispensary supervision

SC 27. Ability to diagnose and determine management tactics for patients with extrapulmonary and common forms of tuberculosis , including co-infection of TB/HIV with the chemoresistant course

SC28. Ability to apply fundamental biomedical knowledge at a level sufficient to perform professional tasks in the field of health care

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## 1.7. Program learning outcomes

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PLO 1. 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.

PLO 2. Understanding and knowledge of basic and clinical biomedical sciences, at a level sufficient for solving professional tasks in the field of health care.

PLO 3. 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.

PLO 4. 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).

PLO 5. 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.

PLO 6. 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).

PLO 7. 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).

PLO 8. 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.

PLO 9. 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.

PLO 10. 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.

PLO 11. Determination of the approach, plan and tactics of managing physiological pregnancy, physiological childbirth and the postpartum period by making a reasoned decision according to existing algorithms and standard schemes.

PLO 12. 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.

PLO 13. 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.

PLO 14. 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.

PLO 15. Organization of the provision of medical aid and medical evacuation measures to the population and military personnel in emergencies and hostilities, including in field conditions.

PLO 16. Formation of rational medical routes for patients; organization of interaction with colleagues in their own and other institutions, organizations and institutions; applying tools for promoting medical services in the market, based on the analysis of the needs of the population, in the conditions of the functioning of the health care institution, its division, in a competitive environment.

PLO 17. 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.

PLO 18. Determination of the state of functioning and limitations of a person's vital activities and the duration of incapacity for work with the preparation of relevant documents, in the conditions of a health care institution, based on data about the disease and its course, peculiarities of a person's professional activity, etc. Maintain medical documentation regarding the patient and the contingent of the population based on regulatory documents.

PLO 19. Planning and implementing a system of anti-epidemic and preventive measures regarding the occurrence and spread of diseases among the population.

PLO 20. Analyzing the epidemiological situation and carrying out measures for mass and individual, general and local prevention of infectious diseases.

PLO 21. Searching for the necessary information in the

professional literature and databases of other sources, analysing, evaluating and application of this information.

PLO 22. Application of modern digital technologies, specialized software, and statistical methods of data analysis to solve complex healthcare problems.

PLO 23. Assessment of the impact of the environment on human health to assess the morbidity of the population.

PLO 24. Organization of the necessary level of individual safety (own and the persons he cares for) in case of typical dangerous situations in the individual field of activity.

PLO 25. Conveying one's knowledge, conclusions and arguments on health care problems and related issues to specialists and non-specialists clearly and unambiguously.

PLO 26. Management of work processes in the field of health care, which are complex, unpredictable and require new strategic approaches, organization of work and professional development of personnel taking into account the acquired skills of effective teamwork, leadership positions, appropriate quality, accessibility and fairness, ensuring the provision of integrated medical help

PLO 27. Fluent communication in the state language and English, both orally and in writing to discuss professional activities, research and projects.

PLO 28. Making effective decisions on health care issues, assessing the necessary resources, and taking into account social, economic and ethical consequences.

PLO 29. Planning, organising and carrying out measures for the specific prevention of infectious diseases, including by the National calendar of preventive vaccinations, both mandatory and recommended. Managing vaccine residues, and organization of additional vaccination campaigns, including immunoprophylaxis measures.

PLO 30. Determination of the management tactics of persons subject to dispensary supervision (children, pregnant women, workers whose professions require mandatory dispensary examination).

PLO 31. Determination of the management tactics of persons suffering from chronic infectious diseases subject to dispensary supervision.

PLO 32. Ability to diagnose and determine the management tactics of patients with extrapulmonary and common forms of tuberculosis , including co-infection of TB/HIV with a chemoresistant course.

## **1.8. Resource support for program implementation**

### **Staffing**

All scientific and pedagogical employees involved in implementing the educational and professional component of the educational programs have confirmed the level of scientific and professional activities, there are mainly full-time employees of Odesa National Medical University of the Ministry of Health of Ukraine. Workers of clinical departments are practitioner specialists.

The teaching of disciplines under the educational and professional

	<p>program "Medicine" is provided by 50 departments, including 40 clinical and 10 theoretical, where 999 scientific and pedagogical workers work. Among them: 1 academician of the National Academy of Sciences of Ukraine; 3 Corresponding Members of the National Academy of Sciences of Ukraine, 1 Honored Inventor of Ukraine, 21 Honored Workers of Science and Technology of Ukraine, 8 Laureates of the State Prize of Ukraine, 1 Honored Health Care Worker of Ukraine, 2 Excellence in Education of Ukraine, 1 Honored Worker of Education of Ukraine, 37 Honored Doctors of Ukraine; 132 doctors of science, 98 professors, 480 candidates of science, 255 associate professors, 387 teachers, assistants without a scientific degree.</p>
<p>Material and technical provision</p>	<p>The material and technical base of ONMedU allows to ensure the educational process in all educational disciplines at the appropriate scientific and methodological level.</p> <p>Lecture halls and study rooms are equipped with modern multimedia equipment, technical teaching aids, and computer equipment; computer classes are set up at the departments; the university has simulation training classrooms for mastering practical skills, as well as a simulation center equipped with modern simulation equipment.</p> <p>Practical training is carried out at the university clinics of ONMedU, at the university's clinical bases for the practical training of higher education students, or under the terms of current agreements for training in health care institutions.</p> <p>The Educational and Production Complex of Innovative Technologies of Learning, Informatization and Continuous Education (EPC ITLICE) of ONMedU operates at the University, which provides technical support for testing, remote and final exams (OSCE), independent practice of practical skills by students.</p> <p>Simulators of the highest seventh level of realism, standardized and hybrid patients are available.</p>
<p>Informational, educational and methodological provision</p>	<p>Educational and methodological support of educational disciplines includes methodological instructions for lectures, practical classes, laboratory works, independent work of students; methodological materials for practical trainings, tasks for knowledge control, video recommendations for performing practical skills. Educational and methodological support is available electronically at <a href="https://info.odmu.edu.ua/">https:// info.odmu.edu.ua/</a>.</p> <p>ONMedU has modern information sources and computer equipment.</p> <p>The official website ( <a href="https://onmedu.edu.ua">https://onmedu.edu.ua</a> ) contains information about educational programs, educational, scientific and educational activities, structural subdivisions, admission rules, contacts.</p> <p>ONMedU library is a modern innovation center of the university, the library fund includes more than 900,000 documents of</p>

scientific and educational literature in Ukrainian and foreign languages, where modern educational literature, scientific, reference and professional periodicals are presented.

The electronic library consists of more than 5,000 documents, mostly educational content. Electronic catalog <https://library.odmu.edu.ua/catalog/> consists of over 170,000 records and operates 24/7 with options for authorized use of all digital documents.

Access to international bibliographic and scientific-metric databases (Hinari, Scopus, WebofScience, etc.) and the annual subscription to scientific medical and biological publications, in particular in English.

## 1.9. Academic mobility

National credit mobility	National credit mobility is carried out based on the Law of Ukraine "On higher education". Recognition results of the study in other institutions of higher education within the academic framework mobility is carried out according to ONMedU agreements.
International credit mobility	Carrying out international mobility within the program Erasmus + , cooperation agreements and other international programs (British Council, DAAD etc.), travel grants.
Teaching foreign seekers of higher education	Teaching foreign students is conducted according to the requirements of current legislation.
	Training is carried out in Ukrainian and/or English at the request of the student.

## 2. LIST OF EDUCATIONAL AND PROFESSIONAL PROGRAM COMPONENTS AND THEIR LOGICAL SEQUENCE

### 2.1. List of educational and professional program components

Code n/a	Educational and professional program components (educational disciplines, course projects (works), practices. Qualification work)	Number of credits	Forms of final control
<b>1. COMPULSORY COMPONENTS</b>			
<b>1.1. Cycle of general training disciplines</b>			
CC 1	Human Anatomy	12.0	Exam
CC 2	Biological and bioorganic chemistry	8.0	Exam
CC 3	Histology, cytology and embryology	9.0	Exam
CC 4	Foreign language (by professional direction)	3.0	Grading test
CC 5	The Latin Language	3.0	Grading test
CC 6	Medical biology	5.0	Exam
CC 7	Medical informatics	3.0	Credit test
CC 8	Medicinal chemistry	3.0	Grading test
CC 9	Microbiology, virology and immunology	7.0	Exam
CC 10	Basics of pedagogy in higher education / Ukrainian as a foreign language	3.0	CreditTest
CC 11	Ukrainian language (by professional direction)	3.0	Credit test
CC 12	Physiology	8.0	Exam
CC 13	Philosophy with a cycle of academic integrity	3.0	Credit test
<b>The total amount of disciplines of general training</b>			<b>70.0</b>
<b>1.2. Cycle of professional training disciplines</b>			
CC 14	Obstetrics and gynecology	10.0	Grading test; exam
CC 15	Anesthesiology and intensive care	3.0	Grading test
CC 16 CC 16.1 CC 16.2	Internal Medicine Endocrinology Occupational diseases	17.5	Grading test; exam Credit test Credit test
CC 17	Hygiene	5.0	Test; Grading test
CC 18	Dermatology and venereology	3.0	Grading test
CC 19	Emergency medicine, with a cycle: Emergencies in medicine	3.0	Grading test Credit test
CC 20	Epidemiology with a course of evidence-based medicine	3.0	Grading test
CC 21	General practice (Family medicine)	3.0	Grading test
CC 22	General surgery	5.0	Grading test
CC 23	Infectious diseases with a cycle of children's infectious diseases	6.0	Grading test, Exam, Credit test

CC 24	Clinical anatomy and operative surgery	3.0	Grading test
CC 25	Neurology	3.5	Exam
CC 26	Oncology	3.0	Credit Test
CC 27	Otorhinolaryngology	3.0	Grading test
CC 28	Ophthalmology	3.0	Grading test
CC 29	Pathomorphology	7.0	Exam
CC 30	Pathophysiology	7.0	Exam
CC 31	Pediatrics, with emergency conditions in pediatrics	13.0	Grading test, Exam, Credit test
CC 32	Training of reserve officers of the field of knowledge "Health care". Specialty "Medicine " / Ukrainian as a foreign language	10.0	Credit Test Grading test
CC 33	Propaedeutics of internal medicine	5.0	Grading test
CC 34	Pediatric propaedeutics	5.0	Grading test
CC 35	Psychiatry, narcology	3.0	Grading test
CC 36	Radiology with radiation medicine	4.0	Grading test Credit Test
CC 37	Social medicine. Public health	3.0	Credit Test
CC 38	Forensic Medicine	3.0	Credit Test
CC 39	Traumatology and orthopedics	3.0	Grading test
CC 40	Health care management	3.0	Credit Test
CC 41	Urology	3.0	Grading test
CC 42	Pharmacology	7.0	Exam
CC 43	Phthisiology	3.0	Grading test
CC 44 CC 44.1 CC 44.2	Surgery with Children's surgery Neurosurgery	17.0	Grading test,Exam Credit Test Credit Test
<b>General scope of professional training disciplines</b>			<b>170.0</b>
<b>1.3. Cycle of practical training disciplines</b>			
CC 45	Patient care (practice)	6.0	Grading test
CC 46	Simulation medicine ( patient care)	3.0	Grading test
CC 47	Nursing (practice)	6.0	Grading test
CC 48	Industrial medical practice	8.0	Grading test
CC 49	Industrial polyclinic medical practice	4.0	Grading test



CC 50	Simulation medicine	3.0	Grading test
<b>The total volume of practical training disciplines</b>		<b>30.0</b>	
<b>TOTAL VOLUME OF COMPULSORY COMPONENTS</b>		<b>270.0 ECTS credits</b>	
<b>2. ELECTIVE COMPONENTS</b>			
<b>2.1. Disciplines of elective block 1</b>			
<i>Block of general training</i>			
<i>A seeker of higher education must choose 6.0 ECTS credits</i>			
EC 1.1	The English Language	3.0	Credit Test
EC 1.2	Life Safety	1.5	Credit Test
EC 1.3	Biology of human behavior (neurophysiological mechanisms)	3.0	Credit Test
EC 1.4	Conflictology	3.0	Credit Test
EC 1.5	Basics of medical terminology in English	3.0	Credit Test
EC 1.6	Fundamentals of bioethics and biosafety	3.0	Credit Test
EC 1.7	Basics of logic	3.0	Credit Test
EC 1.8	Applied physics in medicine	3.0	Credit Test
EC 1.9	Applied chemistry in medicine	3.0	Credit Test
EC 1.10	Modern problems of biophysics	3.0	Credit Test
EC 1.11	Physical Education	3.0	Credit Test
EC 1.12	Nuclear medicine; hardware of clinical practice	3.0	Credit Test
<i>Block of historical, cultural and patriotic training of students</i>			
<i>A student of higher education must choose 6.0 ECTS credits</i>			
EC 1.13	History of domestic medicine	3.0	Credit Test
EC 1.14	History of national philosophical thought	3.0	Credit Test
EC 1.15	History of Ukraine	3.0	Credit Test
EC 1.16	History of Ukrainian Culture	3.0	Credit Test
EC 1.17	History of Ukrainian political students	3.0	Credit Test
EC 1.18	Fundamentals of democracy	3.0	Credit Test
EC 1.19	Folk psychology	3.0	Credit Test
EC 1.20	Ukrainian national idea	3.0	Credit Test
<b>2.2. Disciplines of elective block 2</b>			
<i>A seeker of higher education must choose 18.0 ECTS credits</i>			
EC 2.1	Aerobic types of health fitness	3.0	Credit Test
EC 2.2	Academic writing	3.0	Credit Test
EC 2.3	English Medical Terminology	3.0	Credit Test

EC 2.4	Professional English Language	3.0	Credit Test
EC 2.5	Anthropology	3.0	Credit Test
EC 2.6	Valeology	3.0	Credit Test
EC 2.7	Age physiology	3.0	Credit Test
EC 2.8	Age and individual characteristics and anatomy of human body development	3.0	Credit Test
EC 2.9	European standard of computer literacy	3.0	Credit Test
EC 2.10	The image of a doctor	3.0	Credit Test
EC 2.11	Clinical and anatomical justification of basic instrumental manipulations in the practice of surgery and internal medicine	3.0	Credit Test
EC 2.12	Methodology of evidence-based medicine	3.0	Credit Test
EC 2.13	Basics of general medical embryology	3.0	Credit Test
EC 2.14	Basics of special medical embryology	3.0	Credit Test
EC 2.15	Occupational Health in Medicine	3.0	Credit Test
EC 2.16	Legal status of subjects of medical relations	3.0	Credit Test
EC 2.17	Basic patient communication skills	3.0	Credit Test
EC 2.18	Politology	3.0	Credit Test
EC 2.19	Sociology and medical sociology	3.0	Credit Test
EC 2.20	Safety techniques for working with medical equipment	3.0	Credit Test
EC 2.21	Theory and practice of professional language communication	3.0	Credit Test
EC 2.22	Management of business processes in healthcare institutions	3.0	Credit Test
EC 2.23	Physiological bases of interpretation of clinical and laboratory studies of a healthy person	3.0	Credit Test
EC 2.24	Temporal aspects of human existence	3.0	Credit Test
EC 2.25	HR-management (personnel management) in healthcare institutions	3.0	Credit Test
<b>2.3. Disciplines of elective block 3</b>			
<i>A seeker of higher education must choose 15.0 ECTS credits</i>			
EC 3.1	Barrier-free environment: psychological foundations	3.0	Credit Test
EC 3.2	Biostatistics in medical research	3.0	Credit Test
EC 3.3	Fire injuries of soft tissues. Wound ballistics	3.0	Credit Test
EC 3.4	Classic massage	3.0	Credit Test
EC 3.5	Logic and systemology	3.0	Credit Test

EC 3.6	Medical law of Ukraine	3.0	Credit Test
EC 3.7	Medical psychology	3.0	Credit Test
EC 3.8	Fundamentals of medical communications	3.0	Credit Test
EC 3.9	Basics of immunoprophylaxis	3.0	Credit Test
EC 3.10	Fundamentals of scientific research in medicine	3.0	Credit Test
EC 3.11	Basics of primary surgical technique and emergency surgical care in the practice of a doctor of surgical profile and internal medicine	3.0	Credit Test
EC 3.12	Basics of psychophysiology of childhood and old age	3.0	Credit Test
EC 3.13	Basics of translation of medical literature	3.0	Credit Test
EC 3.14	Professional medical terminology in medicine	3.0	Credit Test
EC 3.15	Transfusion of blood components and preparations in surgery. Use of modern blood substitutes	3.0	Credit Test
EC 3.16	World civilizations	3.0	Credit Test
EC 3.17	Electronic health system Ehealth and telemedicine	3.0	Credit Test
EC 3.18	Nursing practice. Simulation training	3.0	Credit Test
EC 3.19	Social responsibility of medical business	3.0	Credit Test
EC 3.20	Suicidology	3.0	Credit Test
EC 3.21	Epistemology	3.0	Credit Test
EC 3.22	Ukrainian medical terminology / Ukrainian language as a foreign language	3.0	Credit Test
EC 3.23	Physiological foundations of rational nutrition	3.0	Credit Test
EC 3.24	Fitness with elements of combat sports	3.0	Credit Test
EC 3.25	Surgical treatment of wounds	3.0	Credit Test
<b>2.4. Disciplines of selective unit 4</b>			
<i>A seeker of higher education must choose 15.0 ECTS credits</i>			
EC 4.1	Current management issues of patients with cardiac pathology	3.0	Credit Test
EC 4.2	Current issues of traffic injuries	3.0	Credit Test
EC 4.3	Current issues of venereology	1.5	Credit Test
EC 4.4	Current issues of dermatology	3.0	Credit Test
EC 4.5	Current issues of endocrinology	3.0	Credit Test
EC 4.6	Current issues of forensic medicine	3.0	Credit Test
EC 4.7	Allergology of childhood	3.0	Credit Test
EC 4.8	Andrology and sexopathology	3.0	Credit Test

EC 4.9	Biochemistry of rational nutrition and essential nutrients	3.0	Credit Test
EC 4.10	Pediatric gastroenterology and nutrition	3.0	Credit Test
EC 4.11	Hydrotherapy, SPA procedures	3.0	Credit Test
EC 4.12	Ecological medicine	3.0	Credit Test
EC 4.13	Bladder disease in children	3.0	Credit Test
EC 4.14	Liver disease. Echinococcus of the liver	3.0	Credit Test
EC 4.15	Therapeutic and sports massage	3.0	Credit Test
EC 4.16	Medical Genetics	3.0	Credit Test
EC 4.17	Kidney diseases and pregnancy	3.0	Credit Test
EC 4.18	Basics of voluntary counseling and testing for HIV infection	3.0	Credit Test
EC 4.19	Family planning. Contraception	3.0	Credit Test
EC 4.20	Practical dietetics	3.0	Credit Test
EC 4.21	Professional medical communication between a doctor and a patient	3.0	Credit Test
EC 4.22	Mentally regulating types of health fitness	3.0	Credit Test
EC 4.23	Simulation training in the areas of family medicine, internal medicine, pediatrics	3.0	Credit Test
EC 4.24	Sports medicine	3.0	Credit Test
EC 4.25	Modern methods of diagnosis and treatment of inflammatory arthropathies	3.0	Credit Test
EC 4.26	Management of marketing activities of healthcare institutions	3.0	Credit Test
EC 4.27	Physical and rehabilitation medicine	3.0	Credit Test
<b>2.5. Disciplines of selective block 5</b>			
<i>A seeker of higher education must choose 15.0 ECTS credits</i>			
EC 5.1	Current issues of minimally invasive surgical technologies	3.0	Credit Test
EC 5.2	Current issues of neurosurgery and cerebrovascular pathology	3.0	Credit Test
EC 5.3	Current issues of rehabilitation in andrology and sexopathology	3.0	Credit Test
EC 5.4	Current issues of HIV infections	3.0	Credit test
EC 5.5	Current issues of occupational diseases	3.0	Credit Test
EC 5.6	Combat psychological trauma	3.0	Credit Test
EC 5.7	The influence of climatic factors on the state of mental health	3.0	Credit test
EC 5.8	Acute poisoning: diagnosis and intensive therapy	3.0	Credit test

EC 5.9	Dermatovenerology: lesions of genital organs in dermatovenerological practice	3.0	Credit test
EC 5.10	Design of scientific research	3.0	Credit Test
EC 5.11	Childhood gynecology	3.0	Credit Test
EC 5.12	Childhood otorhinolaryngology	3.0	Credit test
EC 5.13	Differential diagnosis of abdominal syndrome in children in the practice of a family doctor	3.0	Credit Test
EC 5.14	Differential diagnosis of vomiting syndrome in children in the practice of a family doctor	3.0	Credit Test
EC 5.15	Home care of the sick and disabled	3.0	Credit test
EC 5.16	Endoscopic technologies in medicine	3.0	Credit test
EC 5.17	Prevention of side effects of anti-tuberculosis drugs	3.0	Credit Test
EC 5.18	Infusion-transfusion therapy in intensive care	3.0	Credit Test
EC 5.19	Kinesio taping in medicine and sports	3.0	Credit test
EC 5.20	Clinical aspects of immunoprophylaxis	3.0	Credit test
EC 5.21	Clinical immunology and allergology	3.0	Credit test
EC 5.22	Clinical neurophysiology and electrophysiological bases of diagnosis	3 , 0	Credit Test
EC 5.23	Clinical pathophysiology	3.0	Credit Test
EC 5.24	Clinical pharmacology	3.0	Credit Test
EC 5.25	Cosmetic and Anti-age massage	3.0	Credit test
EC 5.26	Critical conditions in pediatric endocrinology	3.0	Credit test
EC 5.27	Critical conditions in neonatology. Practicing practical skills on simulation equipment	3.0	Credit test
EC 5.28	Medical practice. Simulation training	3.0	Credit test
EC 5.29	Manual methods of physical therapy. Postisometric relaxation	3.0	Credit Test
EC 5.30	Emergency medicine. Practical aspects. Simulation training	3.0	Credit Test
EC 5.31	Molecular genetic studies in the epidemiology of infectious diseases	3.0	Credit Test
EC 5.32	The most common parasitic diseases of man	3.0	Credit Test
EC 5.33	Emergency medical care for children in extreme situations and military operations	3.0	Credit Test
EC 5.34	Orphan diseases in Ukraine. Simulation training	3.0	Credit Test
EC 5.35	Basics of clinical and laboratory diagnostics	3.0	Credit Test
EC 5.36	Basics of clinical biochemistry	3.0	Credit test

EC 5.37	Fundamentals of ultrasound diagnostics	3.0	Credit test
EC 5.38	Fundamentals of ultrasound dopplerography	3.0	Credit test
EC 5.19	Basic principles of diagnosis and treatment in pediatric hematology	3.0	Credit test
EC 5.40	Especially dangerous infections. The concept of biosafety	3.0	Credit Test
EC 5.41	Peculiarities of childhood oncology	3.0	Credit Test
EC 5.42	Side effects of drugs	3.0	Credit test
EC 5.43	Extrapulmonary tuberculosis	3.0	Credit Test
EC 5.44	Anti-tuberculosis measures in epidemic foci of tuberculosis infection	3.0	Credit test
EC5.45	Principles of emergency care for children at the pre-hospital stage. Practicing practical skills	3.0	Credit test
EC 5.46	Professional communication skills in extreme situations	3.0	Credit test
EC 5.47	Occupational diseases	3.0	Credit test
EC 5.48	The role of forensic medical examinations in the prevention of offenses among medical workers and improving the quality of medical and preventive care for the population	3.0	Credit test
EC 5.49	Sexology with the basics of psychotherapy	3.0	Credit test
EK 5.50	Section biopsy diagnosis	3.0	Credit test
EC 5.51	Strength fitness	3.0	Credit test
EC 5.52	Simulation training in obstetrics and gynecology	3.0	Credit test
EC 5.53	Sports nutrition	3.0	Credit test
EC 5.54	Modern aspects of forensic traumatology	3.0	Credit test
EC 5.55	Modern methods of diagnosis and treatment of systemic connective tissue diseases	3.0	Credit test
EC 5.56	Modern methods of diagnosis and treatment of systemic vasculitis	3.0	Credit test
EC 5.57	Urological and nephrological syndromes in systemic diseases	3.0	Credit test
EC 5.58	Pharmacogenetics and personalized therapy	3.0	Credit test
EC 5.59	Physical therapy and occupational therapy	3.0	Credit test
<b>2.6. Disciplines of Elective Block 6</b>			
<i>A higher education seeker must choose 15.0 ECTS credits</i>			
EC 6.1	Current issues of palliative care for cancer patients	3.0	Credit test
EC 6.2	Current issues of otosurgery	3.0	Credit test
EC 6.3	Current issues of rheumatology pathology	3.0	Credit test
EC 6.4	Obstetrics and gynecology in the practice of a family doctor	3.0	Credit test
EC 6.5	Allergic lesions of the upper respiratory tract and ears	3.0	Credit test
EC 6.6	Antibiotic resistance. Rational use of antibiotics	3.0	Credit test
EC 6.7	Dermatology: pathology of the skin and its appendages associated with diseases of internal	3.0	Credit test

	organs		
EC 6.8	Vaccination of children and adults	3.0	Credit test
EC 6.9	From simple to complex in pediatric cardiorheumatology	3.0	Credit test
EC 6.10	Nosocomial infections	3.0	Credit test
EC 6.11	Fire injuries of the abdominal cavity	3.0	Credit test
EC 6.12	Gender and age characteristics of the course of cardiovascular diseases	3.0	Credit test
EC 6.13	Hepato-biliary homeokinesis in the practice of internal medicine	3.0	Credit test
EC 6.14	Hospital hygiene and disease prevention in healthcare institutions	3.0	Credit test
EC 6.15	"Acute abdomen" in emergency surgery	3.0	Credit test
EC 6.16	ECG diagnostics in the practice of a family doctor	3.0	Credit test
EC 6.17	Express ECG analysis	3.0	Credit test
EC 6.18	Endoscopic technologies in obstetrics and gynecology	3.0	Credit test
EC 6.19	Stages of provision to HIV-infected persons, legal aspects	3.0	Credit test
EC 6.20	Changes in the organ of vision in general diseases	3.0	Credit test
EC 6.21	Insulin therapy in family practice	3.0	Credit test
EC 6.22	Clinical parasitology and tropical medicine	3.0	Credit test
EC 6.23	ENT oncology	3.0	Credit test
EC 6.24	Medical and psychological assistance to combatants and victims of violence and torture in temporarily occupied territories	3.0	Credit test
EC 6.25	Management of diabetes in family practice	3.0	Credit test
EC 6.26	Management of obesity in family practice	3.0	Credit test
EC 6.27	Mechanical jaundice	3.0	Credit test
EC 6.28	Emergency pediatric care for bleeding, accidents and poisoning. Practicing practical skills on simulation equipment	3.0	Credit test
EC 6.29	Emergency conditions in pediatric allergology and pulmonology	3.0	Credit test
EC 6.30	Emergency conditions in pediatric endocrinology	3.0	Credit test
EC 6.31	Emergency conditions in surgery. Practical experience. Simulation training	3.0	Credit test
EC 6.32	Emergency conditions in cardiovascular diseases: algorithms for the diagnosis of palliation, analysis of clinical situations	3.0	Credit test
EC 6.33	Opportunistic viral infections in immunodeficiency states (Clinical Case)	3.0	Credit test
EC 6.34	Fundamentals of video laparoscopy	3.0	Credit test
EC 6.35	Fundamentals of infection control	3.0	Credit test
EC 6.36	Fundamentals of nephrology	3.0	Credit test
EC 6.37	Fundamentals of transplantology	3.0	Credit test
EC 6.38	Peculiarities of diagnosis and treatment of orthopedic pathology in children in the practice of a family doctor	3.0	Credit test
EC 6.39	Peculiarities of polytrauma in children in wartime	3.0	Credit test

	conditions		
EC 6.40	Ophthalmology in the practice of a family doctor	3.0	Credit test
EC 6.41	Assessment of the state of the human immune system	3.0	Credit test
EC 6.42	Precancerous diseases of various localization	3.0	Credit test
EC 6.43	Plastic and reconstructive surgery in ophthalmology	3.0	Credit test
EC 6.44	Polytrauma: diagnosis and intensive therapy	3.0	Credit test
EC 6.45	Prevention of HIV transmission from mother to child and HIV infection in children	3.0	Credit test
EC 6.46	Psycho-behavioral disorders in children	3.0	Credit test
EC 6.47	Abuse syndrome. Sudden death syndrome. Sudden cardiac death syndrome	3.0	Credit test
EC 6.48	Modern methods of diagnosis, treatment and prevention of osteoporosis	3.0	Credit test
EC 6.49	Modern methods of hearing research and hearing aids	3.0	Credit test
EC 6.50	Notifying the patient of bad news. SPIKES protocol	3.0	Credit test
EC 6.51	Thoracoscopy in chest trauma	3.0	Credit test
EC 6.52	Ultrasound in obstetrics and gynecology	3.0	Credit test
EC 6.53	Surgery of malformations	3.0	Credit test
<b>TOTAL VOLUME OF ELECTIVE COMPONENTS</b>		<b>90 ECTS credits</b>	
<b>TOTAL VOLUME OF THE EDUCATIONAL-PROFESSIONAL PROGRAM</b>		<b>360 ECTS credits</b>	

## 2.2. The sequence of educational activities of the higher education seeker by educational components

No	The name of the academic discipline	Distribution by study years					
		1	2	3	4	5	6
1.	Human anatomy	•					
2.	Biological and bio-organic chemistry	•	•				
3.	Histology, cytology and embryology	•					
4.	Latin	•					
5.	Medical biology	•					
6.	Medical informatics	•					
7.	Basics of pedagogy in higher education / Ukrainian as a foreign language	•					
8.	Medical chemistry	•					
9.	Ukrainian language (for professional purposes )	•					
10.	Philosophy with a cycle of academic integrity	•					
11.	<i>Elective components amounting to 1 2.0 ECTS credits</i>	•					
12.	Microbiology, virology and immunology		•				
13.	Physiology		•				
14.	Hygiene		•				
15.	Clinical anatomy and operative surgery		•				•



16.	Reserve Officers' Training: the field of knowledge "Health care". Specialty "Medicine" / Ukrainian as a foreign language		•		•	•	
17.	Radiology with radiation medicine			•		•	
18.	Patient care (practical training)		•				
19.	Simulation medicine (propaedeutic practical training)		•				
20.	Social medicine. Public health		•				
21.	<i>Elective components amounting to 18.0 ECTS credits</i>		•				
22.	Foreign language (for professional purposes)			•			
23.	General surgery			•			
24.	Pathomorphology			•			
25.	Pathophysiology			•			
26.	Propaedeutics of internal medicine			•			
27.	Pediatric propaedeutics			•			
28.	Pharmacology			•			
29.	Nursing training			•			
30.	<i>Elective components amounting to 15.0 ECTS credits</i>						
31.	Obstetrics and gynecology				•	•	•
32.	Internal Medicine with the cycle of endocrinology and occupational diseases				•	•	•
33.	Neurology				•		
34.	Otorhinolaryngology				•		
35.	Ophthalmology				•		
36.	Pediatrics with emergency conditions in pediatrics				•	•	•
37.	Psychiatry, narcology				•		
38.	Urology				•		
39.	Surgery with a cycle pediatric surgery and neurosurgery				•	•	•
40.	Practical Training in General Medicine				•		
41.	<i>Elective components amounting to 15.0 ECTS credits</i>				•		
42.	Anesthesiology and intensive care					•	
43.	Extreme medicine and emergency care					•	
44.	Dermatology and venereology					•	
45.	Infectious diseases with pediatric infectious diseases					•	•
46.	Oncology					•	
47.	Forensic medicine					•	
48.	Traumatology and orthopedics					•	
49.	Phthisiology					•	
50.	Polyclinic practical training					•	
51.	<i>Elective components amounting to 15.0 ECTS credits</i>						
52.	Epidemiology with a course of evidence-based medicine						•
53.	General practice (Family medicine)						•
54.	Health care management						•

55.	Simulation medicine (practical training)						•
56.	<i>Elective components amounting to 15.0 ECTS credits</i>						•
57.	<b>Certification</b>			•			•

Learning outcomes are determined by types of learning activities as a specification of program learning outcomes in the working programs of educational disciplines and practical training and used as criteria for selecting the necessary content sections and relevant learning elements. The working program of an educational discipline must determine the total time for learning, the form of final control, the list of basic disciplines, requirements for informational and methodological support, requirements for evaluation criteria, requirements for the structure of the working program of the educational discipline.



	EC 1	EC 2	EC 3	EC 4	EC 5	EC 6	EC 7	EC 8	EC 9	EC 10	EC 11	EC 12	EC 13	EC 14	EC 15	EC 16	EC 17	EC 18	EC 19	EC 20	EC 21	EC 22	EC 23	EC 24	EC 25	EC 26	EC 27	EC 28	EC 29	EC 30	EC 31	EC 32	EC 33	EC 34	EC 35	EC 36	EC 37	EC 38	EC 39	EC 40	EC 41	EC 42	EC 43	EC 44	EC 45	EC 46	EC 47	EC 48	EC 49	EC 50							
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SC 27																																																									
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IC – INTEGRATED COMPETENCY

GC – GENERAL COMPETENCIES

SC – SPECIAL (PROFESSIONAL) COMPETENCIES



	EC 1	EC 2	EC 3	EC 4	OK 5	EC 6	EC 7	EC 8	EC 9	EC 10	EC 11	EC 12	EC 13	EC 14	EC 15	EC 16	EC 17	EC 18	EC 19	EC 20	EC 21	EC 22	EC 23	EC 24	EC 25	EC 26	EC 27	EC 28	EC 29	EC 30	EC 31	EC 32	EC 33	EC 34	EC 35	EC 36	EC 37	EC 38	EC 39	EC 40	EC 41	EC 42	EC 43	EC 44	EC 45	EC 46	EC 47	EC 48	EC 49	EC 50						
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PLO – PROGRAM LEARNING OUTCOMES

### 3. Forms of certification of higher education seekers

According to the Resolution of the Cabinet of Ministers of Ukraine No. 334 dated March 28, 2018 "On adoption of the Unified State Qualification Exam Procedure for the students enrolled in the Master's academic program and majoring in "22 Healthcare" branch of knowledge", certification of a master's degree seekers in the branch of knowledge " 22 Health Care" is carried out in the form of a Unified State Qualification Exam (USQE), which consists of the following components: an integrated test exam, which is conducted in two stages: "STEP-1" and "STEP-2"; objective structured practical (clinical) exam (OSCE); international exam in the basics of medicine; the English Language Proficiency Test.

OSCE is an exam that assesses the readiness of a graduate to carry out professional activities in accordance with the requirements of the standard of higher education by demonstrating practical (clinical) components of professional competence on a real object (person) or on a model (phantom, dummy, simulators, etc.).

The test components of the USQE are conducted by the Testing Center of the Ministry of Health of Ukraine, and the OSCE - by the state examination commission, which is formed annually at ONMedU, on the basis of the Education-Industrial Complex of Innovative Teaching Technologies, Informatization and Continuous Education

Graduates who have successfully completed the educational-professional program and successfully passed the State Certification are issued a document on higher education of the established form awarding them a master's degree with the qualification "Master of Medicine. Medical Doctor".

**Guarantor of the educational-professional program.**

the First Vice-Rector

Doctor of Medical Sciences, professor



**Valeriia MARICHEREDA**

## List 1 (syndromes and symptoms):

1. amenorrhea
2. acromegaly
3. anemic syndrome
4. anosmia and ageusia
5. anuria and oliguria
6. arterial hypertension
7. arterial hypotension
8. asphyxia
9. chest pain
10. pain in the area of the heart
11. abdominal pain
12. pain in the limbs and back
13. pain in the perineum
14. sore throat
15. pallor
16. vomiting
17. broncho-obstructive syndrome
18. bulbar syndrome
19. effusion in the pleural cavity
20. exhaustion ( asthenia, cachexia )
21. hallucinatory-paranoid syndrome
22. fever
23. hemorrhagic syndrome
24. hepatomegaly and splenomegaly
25. hypoglycemia
26. hyperglycemia
27. headache
28. dysuria
29. dysmenorrhea
30. dyspepsia
31. dysphagia
32. diarrhea
33. exanthema, enanthema
34. jaundice
35. shortness of breath
36. constipation
37. dizziness
38. child growth retardation
39. cardiomegaly
40. cough
41. intestinal obstruction
42. coma
43. external bleeding
44. internal bleeding
45. hemoptysis
46. lactorrhea
47. lymphadenopathy
48. manic and depressive syndrome
49. uterine bleeding
50. meningeal syndrome
51. edematous syndrome
52. nephritic syndrome
53. nephrotic syndrome
54. obesity (excess body weight)
55. paresis, paralysis
56. premature sexual development
57. fractures of tubular bones
58. tension pneumothorax (closed)
59. relaxation pneumothorax (open)
60. valvular pneumothorax
61. polyuria
62. portal hypertension
63. speech disorder (aphasia)
64. heart rhythm and conduction disturbances
65. sudden cardiac arrest
66. disorders of consciousness
67. itchy skin
68. urinary syndrome
69. dementia syndrome
70. dehydration syndrome
71. pulmonary infiltrate syndrome
72. malabsorption syndrome
73. indigestion syndrome
74. systemic inflammatory response syndrome
75. systemic inflammatory response syndrome
76. thirst
77. stridor
78. articular syndrome
79. convulsions
80. weight loss (body weight deficit, cachexia)
81. cyanosis (diffuse and local)
82. partial or complete loss of vision
83. partial or complete hearing loss
84. gastrointestinal bleeding



## List 2 (diseases):

*Diseases of the blood and hematopoietic organs, disorders involving the immune mechanism:*

1. anemia
2. hemolytic disease of newborns
3. hemophilia
4. leukemia
5. lymphomas
6. congenital and acquired immunodeficiency states
7. sepsis of newborns
8. surgical sepsis
9. thrombocytopenia
10. idiopathic thrombocytopenic purpura
11. chronic radiation damage

*Mental and behavioral disorders:*

12. bipolar affective disorder
13. acute psychosis, including alcoholic delirium
14. epilepsy
15. neurotic disorders
16. personality disorders
17. schizophrenia

*Diseases of the nervous system:*

18. intracranial injury
19. meningitis, encephalitis
20. migraine and other types of headache
21. perinatal encephalopathy
22. violation of the autonomic nervous system
23. violation of cerebral circulation
24. vertebrogenic diseases of the nervous system, neuropathy and polyneuropathy
25. multiple sclerosis
26. chronic occupational injuries (vibration disease, occupational dyskinesias)
27. strokes (ischemic, hemorrhagic)

*Eye diseases:*

28. refraction anomalies
29. blepharitis
30. glaucoma
31. cataract
32. keratitis
33. conjunctivitis
34. retinopathy

35. foreign body in the eye
36. injuries of the organ of vision
37. uveitis

*Diseases of the throat, ears, nose:*

38. laryngitis
39. otitis
40. peritonsillar abscess
41. sinusitis
42. tonsillitis
43. injuries of the throat, ear, nose

*Diseases of the cardiovascular system:*

44. aortic aneurysms
45. arterial hypertension (primary and secondary)
46. atherosclerosis
47. varicose veins of the lower extremities
48. congenital heart defects
49. acute occlusion of main and peripheral arteries
50. endocarditis
51. ischemic heart disease
52. carditis (endocarditis, myocarditis, pericarditis)
53. cardiomyopathy
54. pulmonary heart
55. acquired heart defects
56. obliterating endarteritis
57. heart rhythm and conduction disturbances
58. heart failure
59. injuries of the heart and blood vessels
60. pulmonary embolism
61. phlebitis, thrombophlebitis

*Diseases of respiratory organs and the mediastinum:*

62. asphyxia
63. bronchial asthma
64. bronchitis, bronchiolitis
65. bronchiectatic disease
66. bronchopulmonary dysplasia
67. congenital malformations of respiratory organs

68. acute respiratory distress syndrome of adults
69. infectious and destructive lung diseases
70. mediastinitis
71. cystic fibrosis
72. lung and mediastinal neoplasms
73. pleurisy
74. pneumoconiosis
75. pneumonia
76. pneumothorax
77. respiratory distress syndrome and pneumonia of newborns
78. foreign body in the respiratory tract
79. chest injuries (superficial, open)
80. chronic obstructive pulmonary disease

*Diseases of digestive organs:*

81. prolapse of the rectum
82. congenital malformations of digestive organs
83. gastroesophageal reflux disease, esophagitis
84. gastritis, duodenitis
85. acute and chronic hepatitis
86. acute intestinal obstruction
87. acute and chronic appendicitis
88. acute and chronic pancreatitis
89. benign diseases of the esophagus
90. enteritis, colitis
91. inflammatory diseases of the rectum and perianal region
92. strangulated and non-strangulated hernia
93. neoplasms of the esophagus, stomach, colon, liver and pancreas
94. peptic ulcers of the stomach and duodenum
95. peritonitis
96. perforation of a hollow organ
97. liver failure
98. stenosis of the pylorus of the stomach
99. abdominal injuries (superficial, open)
100. functional gastrointestinal disorders
101. diseases of the operated stomach
102. cholecystitis, cholangitis, gallstone disease, choledocholithiasis
103. celiac disease
104. liver cirrhosis
105. gastrointestinal bleeding

*Diseases of the genitourinary system:*

106. amyloidosis of the kidneys
107. balanitis, balanoposthitis
108. congenital malformations of the urinary system
109. glomerulonephritis
110. dysmetabolic nephropathies
111. nephrotic syndrome
112. neoplasms of the kidney, urinary tract and prostate gland
113. pyelonephritis
114. prostatitis
115. urolithiasis
116. tubulointerstitial nephritis
117. urethritis
118. chronic kidney disease
119. cystitis

*Diseases of the skin and subcutaneous tissue:*

120. allergic dermatoses (dermatitis, toxidermia, eczema)
121. bacterial diseases of the skin and subcutaneous tissue, pyoderma
122. purulent-inflammatory diseases of fingers and hands
123. purulent-inflammatory skin diseases in children and newborns
124. mycoses
125. burns and frostbite
126. parasitic skin diseases (scabies, pediculosis)
127. psoriasis
128. bullous dermatoses
129. specific surgical infection (anaerobic clostridial and non-clostridial)

*Diseases of the musculoskeletal system and connective tissue:*

130. ankylosing spondyloarthritis
131. congenital and acquired malformations of the musculoskeletal system
132. acute rheumatic fever
133. dermatomyositis and polymyositis
134. neoplasm of the musculoskeletal system
135. osteoarthritis
136. osteomyelitis
137. gout
138. polytrauma
139. reactive arthritis
140. rheumatoid arthritis
141. systemic scleroderma

142. systemic lupus erythematosus
143. systemic vasculitis (polyarteritis nodosa, hemorrhagic vasculitis, hypersensitivity vasculitis)
144. common fractures of the bones of the shoulder, forearm, hand, hip, leg, foot
145. pelvis injury
146. spine injury
147. damage to large joints (hip, knee, ankle-foot, elbow)
148. chronic rheumatic disease
149. juvenile rheumatoid arthritis

*Diseases of the endocrine system, eating disorders and metabolic disorders:*

150. acromegaly and pituitary gigantism
151. congenital dysfunction of the cortex of the adrenal glands
152. nodular goiter, tumors of the thyroid gland
153. hyperplasia of the thymus
154. hyperparathyroidism
155. hypoparathyroidism
156. hypogonadism
157. hypothyroidism
158. protein-energy deficiency
159. hypopituitarism
160. pituitary dwarfism
161. genetic syndromes with endocrine complications: Turner syndrome, Russell-Silver, Prader-Willi, Laron syndrome, etc.
162. diffuse toxic goiter
163. endemic goiter
164. iodine deficiency diseases of the thyroid gland
165. cryptorchidism
166. dwarfism in a child born SGA
167. neuro-endocrine tumors
168. diabetes insipidus
169. organic (including congenital) hyperinsulinism
170. obesity
171. premature sexual development
172. violation of gender differentiation
173. disorders of calcium-phosphorus metabolism, vitamin D metabolism, rickets, spasmophilia
174. congenital dysfunction of the adrenal cortex
175. tumors of the pituitary gland

176. tumors of the adrenal glands
177. Klinefelter's syndrome
178. hereditary metabolic diseases (phenylketonuria)
179. hereditary chromosomal disorders
180. thyroiditis
181. thyrotoxicosis
182. Itsenko-Cushing's disease and syndrome
183. chronic adrenal insufficiency
184. diabetes

*Infectious and parasitic diseases:*

185. bacterial food poisoning
186. rabies
187. botulism
188. viral hepatitis
189. chicken pox
190. congenital infections of the newborn
191. helminth infections
192. herpesvirus diseases
193. influenza and other acute respiratory viral infections
194. diphtheria
195. infectious mononucleosis
196. candidiasis
197. whooping cough
198. intestinal bacterial infections
199. intestinal viral infections
200. measles
201. tick-borne viral encephalitis
202. rubella
203. leptospirosis
204. malaria
205. meningococcal infection
206. especially dangerous viral infections
207. mumps infection
208. poliomyelitis
209. tetanus
210. protozoan infections
211. rickettsiosis
212. anthrax
213. rabies
214. scarlet fever
215. tuberculosis of different localization
216. Lyme disease
217. disease caused by human immunodeficiency virus (HIV)
218. chlamydial infections
219. cholera
220. plague

- 221. coronavirus infection COVID-19 caused by severe acute respiratory syndrome-2 coronavirus
- 222. (SARS-CoV-2) infectious diseases transmitted mainly sexually:
- 223. gonococcal infection
- 224. syphilis

*Diseases of the female reproductive system:  
pathologies of pregnancy:*

- 225. multiple pregnancy
- 226. vomiting (vomiting) of pregnant women
- 227. pregnancy with extragenital pathology
- 228. fetal distress during pregnancy
- 229. fetal growth retardation
- 230. immune conflict during pregnancy
- 231. molar pregnancy (hydatidiform mole)
- 232. placenta previa
- 233. premature detachment of the placenta
- 234. premature birth and delayed pregnancy
- 235. ectopic pregnancy
- 236. preeclampsia and eclampsia
- 237. spontaneous abortion

*pathology of childbirth and the postpartum period:*

- 238. anomalies of labor activity
- 239. anomalies of the pelvis, including a clinically narrow pelvis
- 240. fetal distress during childbirth
- 241. childbirth and postpartum bleeding
- 242. incorrect positions and presentation of the fetus
- 243. postpartum septic diseases
- 244. injuries of the uterus and birth canal

*gynecological diseases:*

- 245. abnormal uterine bleeding
- 246. ovarian apoplexy
- 247. infertility
- 248. congenital malformations of female genital organs
- 249. benign dysplasia of mammary glands
- 250. benign and precancerous neoplasms of female genital organs
- 251. endometriosis
- 252. inflammatory diseases of female genital organs

- 253. malignant neoplasms of female genital organs
- 254. mastitis
- 255. neuroendocrine syndromes
- 256. neoplasm of the mammary gland

### List 3 (emergency conditions):

1. asphyxia (including at birth)
2. hypertensive crisis
3. hypoglycemia (coma)
4. hemophthalmus
5. acute respiratory failure (respiratory distress)
6. acute urinary retention
7. acute adrenal insufficiency
8. acute bleeding
9. acute cerebral insufficiency
10. acute kidney failure
11. acute liver failure
12. acute heart failure
13. acute poisoning, including by combat poisons
14. acute coronary syndrome
15. acute attack of glaucoma
16. acute psychosis
17. acute anaphylactic reactions
18. acute heart rhythm disturbances
19. acute radiation and chemical damage, including in field conditions and emergency situations
20. diabetic coma, including ketoacidotic, hyperosmolar, lacticidemic
21. electric shock
22. status epilepticus
23. collapse
24. occlusion of the central retinal artery
25. sudden stoppage of blood circulation, sudden cardiac death
26. renal colic
27. normal childbirth
28. impaired consciousness and comatose states
29. biliary colic
30. cold injury, including in field conditions
31. thermal injury, including in field conditions
32. venous and arterial thromboembolism (pulmonary artery thromboembolism)
33. syndrome of acute blood loss, including in field conditions and emergency situations
34. convulsive syndrome
35. strangulation asphyxia
36. drowning
37. bites of snakes, insects, animals
38. shock
39. penetrating wounds, in particular during combat operations
40. burns, including in field conditions
41. foreign bodies in the respiratory tract, gastrointestinal tract, ENT organs and the eye
42. esophageal atresia
43. congenital high and low intestinal obstruction
44. diaphragmatic hernias (asphyxial entrapment)
45. portal hypertension (bleeding from varicose veins of the esophagus)

#### **List 4 (laboratory and instrumental studies):**

1. analysis of ascitic fluid
2. pleural fluid analysis
3. synovial fluid analysis
4. Zimnitsky's urine test
5. Nechiporenko's urine test
6. alpha-amylase activity in blood and urine
7. total protein and its fractions
8. pulse oximetry, indicators of acid-base status and blood gases
9. C-reactive protein and procalcitonin
10. blood glucose, glycated hemoglobin
11. oral glucose tolerance test
12. lipid profile, brain natriuretic peptide (BNP)
13. blood hormones
14. serum ferritin, iron and copper
15. creatinine, cystatin C, blood and urine urea, glomerular filtration rate
16. blood electrolytes
17. blood aminotransferases
18. total blood bilirubin and its fractions
19. coagulogram
20. blood uric acid
21. blood lactic acid
22. blood alkaline phosphatase
23. histomorphological study of lymph node biopsy
24. histomorphological study of parenchymal organs biopsy
25. histomorphological study of biopsy of mucous membranes
26. histomorphological study of muscle and skin biopsy
27. study of the internal environment of premises (indicators of microclimate, natural and artificial lighting, bacteriological and chemical air pollution)
28. study of the function of external respiration
29. standard ECG (in 12 leads)
30. endoscopic examination of the bronchi
31. endoscopic examination of the digestive tract
32. echocardiography and dopplerography
33. general stool examination
34. fecal pancreatic elastase
35. fecal calprotectin
36. complete blood count
37. urinalysis
38. urine sugar and acetone
39. cerebrospinal fluid (CSF) analysis
40. analysis of sternal punctate
41. sputum analysis
42. H.pylori breath test
43. immunological blood profile test
44. serological reactions in infectious diseases
45. rapid diagnostic tests for viral diseases
46. amplification methods for infectious diseases (PCR, PCR)
47. serological reactions in autoimmune diseases
48. chemical and bacteriological studies of the human environment (atmospheric air, water bodies, soil)
49. microbiological study of biological fluids and secretions
50. measurement of radiation (sound, vibration, ionizing), individual radiometry
51. methods of instrumental visualization of the thyroid gland
52. X-ray contrast angiography
53. instrumental imaging of organs of the abdominal cavity
54. instrumental imaging of chest cavity organs
55. instrumental imaging of the genitourinary system
56. instrumental imaging of the fetus
57. instrumental imaging of the organ of vision (biomicroscopy, ophthalmoscopy, tonometry)
58. methods of instrumental examination of ENT organs (otoscopy, oropharyngoscopy, rhinoscopy)
59. instrumental imaging of the skull, spine, spinal cord, bones and joints
60. instrumental imaging of the breast
61. tuberculin diagnosis
62. fractional study of bile and pH-metry of the stomach and esophagus
63. chemical, organoleptic, bacteriological examination of food and drinking water
64. cytological examination of the cervix
65. measurement of ergonomic indicators of difficulty and intensity of work
66. assessment of children's physical development according to sigma and centile nomograms
67. assessment of blood pressure in children according to centile nomograms accounting for height

68. biomarkers of necrosis (creatinine phosphokinase, MB fraction, troponins)
69. natriuretic peptides
70. BP measurement methods (office BP, home BP monitoring, ambulatory BP monitoring)

## **List 5 (medical manipulations/procedures):**

1. care for skin, prevention of bedsores
2. care for ears, nasal cavity, and eyes
3. take body temperature
4. perform an enema
5. prepare the patient for urine and feces samples collection
6. to restore the airway patency
7. perform basic cardiopulmonary resuscitation
8. perform defibrillation using a manual automatic cardioverter defibrillator
9. register a standard 12-lead ECG
10. to temporarily stop external bleeding
11. carry out primary wound debridement, dressing, skin sutures removal, in particular in field conditions
12. apply bandages, incl. in field conditions
13. insert nasogastric and orogastric probes
14. carry out transport immobilization
15. administer medicinal substances (intravenous jet and drip, intraosseous), in particular in field conditions
16. provide peripheral venous and intraosseous access
17. measure blood pressure
18. perform bladder catheterization with a soft catheter
19. provide medical care for a healthy newborn baby in the first hours of life
20. perform the technique of "skin-to-skin" contact of the newborn and early breastfeeding attachment
21. carry out a digital rectal examination
22. examine the rectum using a rectal mirror
23. carry out a digital examination of the prostate
24. carry out a clinical examination of the mammary glands
25. perform a pleural puncture
26. perform a pericardial puncture according to Larray
27. perform a puncture of the abdominal cavity through the posterior fornix
28. perform laparocentesis
29. determine blood groups and Rh
30. transfuse blood components and blood substitutes
31. perform a bimanual examination of a woman's pelvic organs
32. perform mirror pelvic examination of a woman
33. perform pelviometry
34. to carry out an external (Leopold's techniques) obstetric examination
35. to carry out an internal obstetric examination
36. perform auscultation of the fetus
37. take swabs for bacterioscopic, bacteriological and cytomorphological examination
38. palpate the thyroid gland
39. conduct field of vision test (control method)
40. conduct examination on ciliary pain
41. perform the test for intraocular pressure (palpatory)
42. perform an inversion of the upper eyelid
43. remove a foreign body from the conjunctiva
44. carry out anterior tamponade of the nose
45. carry out a clinical examination of the organ of vision
46. carry out a clinical examination of the ENT organs
47. perform conicotomy
48. perform Heimlich techniques
49. perform pulse oximetry
50. apply compresses ("dry", "hot", "cold")
51. assess the state of sexual development of children
52. evaluate the anthropometric parameters of the patient (body weight, height, waist circumference)
53. evaluate the pulse on peripheral arteries
54. perform auscultation of the heart and blood vessels
55. perform percussion and auscultation of the lungs
56. palpate the abdomen
57. prepare the patient for tests with physical exertion (treadmill test, bicycle ergometry)
58. conduct an assessment of joint dysfunction
59. conduct a physical examination of the patient
60. palpate lymph nodes
61. perform opening abscesses of different localization



62. apply aseptic, burn, corrective plaster bandages
63. apply Freyk's pillow, Pavlyk's stirrups, Gnevkovsky's apparatus, Wilensky's splint
64. apply brace systems
65. measure the length of the limb
66. perform pneumo-irrigography
67. perform Wangesteen-Kakovich-Riss invertography
68. calculate parenteral nutrition