PRIVATE HIGHER EDUCATION INSTITUTION
“INTERNATIONAL ACADEMY OF ECOLOGY AND MEDICINE”

EDUCATIONAL AND PROFESSIONAL PROGRAM: MEDICINE

Second (Master) level
Specialty: 222 Medicine
Knowledge area: 22 Health Care
Educational qualification: Master of Medicine
Professional qualification: Doctor

APPROVED
By the Decision of the Academic Council of the International Academy of Ecology and Medicine

Chair of the Academic Council
_____

Educational and professional program becomes effective by the Order of the Acting Rector of the International Academy of Ecology and Medicine dd. _____, No. ___

Kyiv – 2024

The educational program is developed according to the Higher Education Standard of the second (Master) level, knowledge area: 22 Health Care, specialty: 222 Medicine, approved by the Order of the Ministry of Education and Science of Ukraine dd. November 8, 2021, order No. 1197; the Law of Ukraine "On Higher Education" dd. July 1, 2014, No. 1556-VII; the Law of Ukraine "On Education" dd. September 5, 2017, No. 2145-VIII; the Resolution of the Cabinet of Ministers of Ukraine dd. December 30, 2015, No. 1187 "About Approval of Licensed Conditions of Implementation of Educational Activities" (as amended by the Resolution of the Cabinet of Ministers of Ukraine dd. May 6, 2020, No. 347); the Resolution of the Cabinet of Ministers of Ukraine dd. November 23, 2011, No. 1341 "About Approval of the National Qualifications Frameworks" (as amended by the Resolution of the Cabinet of Ministers of Ukraine dd. June 25, 2020, No. 519); the Order of the Ministry of Education and Science of Ukraine dd. November 6, 2015, No. 1151 "On Particularities of Adopting the List of Knowledge Areas and Specialties for Training Students" (as amended).

Profile of the educational program

1.1. General information about the educational program	
Full name of the higher education institution	Private Higher Education Institution "International Academy of Ecology and Medicine"
Level of higher education	Second (Master)
Degree of higher education	Master
Educational qualification	Master of Medicine
Diploma qualification	Master's degree Specialty: 222 Medicine Professional qualification: doctor
Knowledge area	22 Health Care
Specialty	222 Medicine
Official name of the educational and professional program	Medicine
Type of diploma and capacity of the educational and professional program	Master's Degree Diploma, single 360 ECTS credits Period of study: 5 years and 10 months

Mode of study	Full-time only
Accreditation	
Cycle/level	National Qualifications Framework of Ukraine – 7 level, FQ-EHEA – second cycle, EQF-LLL – 7 level
Background	To obtain a Master's degree, applicants should have complete general secondary education, the educational qualification level of Junior Specialist, the degree of Professional Junior Bachelor, Bachelor according to the results of the External Independent Evaluation (NMT) and entrance examinations at the higher education institution in subjects (disciplines) that are not included in the External Independent Evaluation (NMT).
Languages of instruction	Ukrainian, English

Validity of the educational program	Until June 30, 2030 (with a possibility of annual update if necessary)
Internet address of constant placement of educational program description	

1.2. Goal of the educational program

To train highly qualified specialists able to organize and conduct professional activities in medicine, solve complicated research and innovative tasks and problems, and critically analyze healthcare challenges. The program is aimed at developing the ability to work efficiently in modern conditions, ensuring a high level of autonomy in learning and future professional activities. To apply specialized conceptual knowledge and skills, which scope of application is stipulated by the defined lists of syndromes and symptoms of diseases, physiological states and somatic illnesses requiring a special technique of patient management, emergencies, laboratory and instrumental studies, medical manipulations, etc.

1.3. Characteristics of the educational program

Subject area (knowledge area, specialty, specialization)	Knowledge area: 22 Health Care Specialty: 222 Medicine

Subject area description	*Object of study and/or medical activities:* Prevention, diagnostics and treatment of human diseases, assessment of the impact of health problems on patients, their families and population. Activities are focused on maintaining health, preventing diseases, providing medical care and rehabilitation, as well as promoting a healthy lifestyle in society. *Learning objectives:* Acquisition of the ability to solve complicated research and innovative tasks and problems in medicine, including the prevention, diagnostics, and treatment of human diseases, as well as the maintenance and improvement of health. Development of competencies for further learning with a high degree of autonomy, the adoption of cutting-edge medical technologies and management in healthcare, and the provision of high-quality medical care at individual, family, and population levels. *Theoretical content of the subject area:* The theoretical content covers concepts, principles, and theories of prevention, diagnostics, and treatment of human diseases. It explores the regularities of functioning of organs and body systems, pathophysiological processes, the fundamentals of medical genetics, public health, and social aspects of healthcare. Significant attention is given to individual, family, and population-based approaches to medical practice, as well as the ethical and legal foundations of professional activities. *Methods, techniques and technologies:* Anamnestic, clinical, laboratory, and instrumental methods of the diagnostic process, definition of leading symptoms and syndromes, determination of preliminary and clinical diagnosis. Application of state-of-the-art technologies of diagnostics, treatment, and prevention, as well as management and organization of medical care. The educational process is focused on integrating innovative technologies, simulation-based learning, and digital tools for enhancing practical and theoretical skills in medicine.
	Tools and equipment: Cutting-edge diagnostic, treatment, and other devices, tools and devices applied in professional activities.
Focus of the educational program	The Medicine educational program is focused on training highly qualified doctors by studying fundamental medical disciplines, developing clinical skills and ethical standards, as well as scientific preparation. The program also includes opportunities for international mobility, cooperation, and

	practice in various healthcare systems, fostering students' development at a global level.
Key focus of the educational program and specialization	Training of specialists for professional, organizational, management, and research activities in the health care sector. Higher education in the knowledge area: 22 Health Care, specialty: 222 Medicine.
Program features	The unique features of the Medicine program at the International Academy of Ecology and Medicine (IAEM) include the integration of advanced medical technologies with environmental health aspects, providing students with the deep understanding of the interrelation between human beings and the environment. The program combines classical medical training with a focus on modern teaching methods, enabling future doctors to work efficiently in today's challenging environment while addressing global health challenges. The program includes measures to foster international cooperation through student exchanges, joint projects with foreign universities, and opportunities for internships abroad. Students gain access to global medical knowledge and experience, enabling them to adapt to diverse healthcare systems and treatment approaches while developing skills for working in the international environment. Student-centered learning.
1.4. Graduates' ability to employment and academic rights	
Graduates' employability	Graduating from the Master's 222 Medicine educational and professional program, specialists are able to perform professional work: internship doctor (OC code (occupational classification) – 3229); junior doctor (OC code – 3221); resident doctor (OC code – XXX).
Academic rights of graduates	Acquisition of additional qualifications and medical specializations in the adult education system, particularly in the internship. Receiving education at the third (educational and scientific) level of higher education.

1.5. Teaching and assessment

Teaching and learning	Lectures, practical classes, practical training (educational and on-the-job practices), control activities. Acquisition of skills in anamnestic, clinical, laboratory, instrumental methods of the diagnostic process, definition of leading symptoms and syndromes, determination of preliminary and clinical diagnosis; technologies of diagnostics, treatment and prevention, management and organization of healthcare operations. Research activities. Competence-based, student-centered study, initiative self-study, problem-based learning.
Assessment	The assessment of student program learning outcomes is conducted according to the Regulations on the Assessment of Student Learning Activities at the International Academy of Ecology and Medicine. The assessment is based on the ECTS system, 200-point and national assessment scale. One provides the student assessment in all types of classes and extracurricular educational activities. Excellent, good, satisfactory and failure grades are put: according to the results of exams and graded tests, practical training results. The pass grade is given according to the Pass/Fail test results. The pass result is put according to the outcome of the Unified State Qualification Exam (USQE): Integrated Test Exam Krok 1. Professional English exam, Krok 2. Objective Structured Clinical (Practical) Exam, International Foundations of Medicine Exam.
1.6. Program competencies	
Integral competence (IC)	The graduate's ability to provide qualified medical care based on fundamental knowledge of medical sciences, ecology, and modern medical technologies. The graduate has efficient communication skills with patients and colleagues, as well as the ability to adapt to various healthcare systems, conduct scientific research, apply clinical methods for diagnostics and treatment, taking into account ecological aspects of health, and practice medicine in accordance with ethical norms and international standards. The graduate is also able to continue learning with a high degree of autonomy.
General competencies (GC)	GC 1. Ability to abstract thinking, analysis, and synthesis. GC 2. Ability to learn and acquire contemporary knowledge.

	GC 3. Ability to apply the acquired knowledge in real-life practical situations. GC 4. Deep understanding of the specifics of professional activities and subject area. GC 5. Ability to adapt and act efficiently in new and strange conditions. GC 6. Ability to make reasonable and responsible decisions. GC 7. Ability to work in a team efficiently. GC 8. Ability to proper interpersonal interaction. GC 9. Ability to talk in foreign languages. GC 10. Ability to apply cutting-edge information and communication technologies. GC 11. Ability to find, process, and analyze information from different sources. GC 12. Distinctness regarding set objectives and responsibilities for their duties. GC 13. Awareness of principles of equal opportunities and gender equality. GC 14. Ability to exercise your rights and obligations as an active member of society, be aware of values of democratic society, and the need for its sustainable development, the rule of law, human and civil rights and freedoms in Ukraine. GC 15. Ability to keep and multiply moral, cultural, and scientific values, to understand the history and regularities of the subject area development, its place in the general system of knowledge about nature and society and in the development of society and technology, to use various forms of physical activity to ensure active leisure and keep a healthy lifestyle.

Specialized (professional, subject) competencies (PC)	PC 1. Ability to collect medical information about patients and analyze clinical data to make reasonable decisions. PC 2. Ability to define the required list of laboratory and instrumental research and assessment of their results for further diagnostics and treatment. PC 3. Ability to determine a provisional and clinical diagnosis based on the collected data and clinical examination. PC 4. Ability to define necessary terms of employment and leisure while treating and preventing diseases. PC 5. Ability to determine the character of nutrition while treating and preventing diseases. PC 6. Ability to define the principles and character of disease treatment and prevention, taking into account the patient's individual features. PC 7. Ability to diagnose emergencies provide the necessary medical care in extreme situations. PC 8. Ability to determine techniques of providing emergency medical aid in critical situations. PC 9. Ability to take treatment and evacuation measures in case of emergencies. PC 10. Ability to conduct medical manipulations required to diagnose and treat patients. PC 11. Ability to solve medical problems in new or unconventional environments with incomplete or limited information, taking into account aspects of social and ethical responsibility. PC 12. Ability to define techniques of keeping physiological pregnancy, physiological birth and a postnatal period. Skills in consulting about family planning issues and choosing contraceptive methods. PC 13. Ability to take sanitary, hygienic, and preventive measures to maintain public health. PC 14. Ability to plan and take preventive and anti-epidemic measures against infectious diseases. PC 15. Ability to conduct the working capacity examination to determine the patient's ability to perform his/her professional duties. PC 16. Ability to keep medical documents, including the electronic ones, according to the legislative requirements and medical standards.

	PC 17. Ability to assess the impact of the environment, social, economic, and biological determinants on the state of health of individuals, family, and population. PC 18. Ability to analyze activities of doctors, medical department, or healthcare facility, to ensure the quality of medical aid and improve the efficiency of medical resources application. PC 19. Ability to organize and integrate medical aid delivery to people and promote medical services to improve access and quality of service. PC 20. Ability to carry out anti-epidemic and medical statistical research of public health; to process social, economic, and medical information. PC 21. To render your knowledge, conclusions, and arguments about health and related issues to specialists and non-specialists, particularly students, in a clear and unambiguous manner. PC 22. Ability to efficiently manage healthcare working processes that are complex, unpredictable, and require new strategic approaches. PC 23. Ability to develop and implement scientific and applied healthcare projects to improve medical services. PC 24. Ability to comply with the ethical principles when working with patients, laboratory animals, and other research objects. PC 25. To keep professional and academic integrity, take the responsibility for the reliability of scientific findings.

1.7. Program learning outcomes	
Program learning outcomes (PLO)	PLO 1. To have comprehensive knowledge of the structure of professional activities. To be able to carry out professional activities requiring updating and integration of knowledge. To be responsible for professional development, ability to further independent learning. PLO 2. To understand and know fundamental and clinical biomedical sciences at the level sufficient to solve professional tasks in the healthcare sector. PLO 3. Specialized conceptual knowledge that includes healthcare scientific achievements and is the foundation for research; critical comprehension of medical issues and related interdisciplinary problems. PLO 4. To distinguish and identify principal clinical symptoms and syndromes (according to list 1); to define a provisional clinical diagnosis (according to list 2) using standard techniques, preliminary data on patient's medical history, data on patient examination, knowledge of human beings, their organs and systems. PLO 5. To collect complaints, life and medical history, assess the psychomotor and physical development of patients, the condition of organs and body systems based on the results of laboratory and instrumental studies to assess information about the diagnosis (according to list 4), taking into account patient's age. PLO 6. To define a final clinical diagnosis by making a reasoned decision and analyzing obtained subjective and objective data on clinical, additional examination, conducting differential diagnostics, complying with appropriate ethical and legal standards, under the control of a supervising physician at a healthcare facility (according to list 2). PLO 7. To prescribe and analyze additional (obligatory and optional) methods of examination (laboratory, functional and/or instrumental) (according to list 4) of patients with diseases of organs and body systems for differential diagnostics of diseases (according to list 2).

	PLO 8. To define the main clinical syndrome or the cause of the severity of the injured person's/victim's condition (according to list 3) by making a reasoned decision and assessing the person's state in any circumstances (at a healthcare facility, beyond it), including emergency and combat situations, in the field, with the lack of information and limited time. PLO 9. To define the character and principles of disease treatment (conservative, operative) (according to list 2), taking into account patient's age, at a healthcare facility, beyond it, and at medical evacuation stages, including in the field, based on the provisional clinical diagnosis, complying with appropriate ethical and legal standards, by making a reasoned decision according to the current algorithms and standard patterns, to be able to justify personal recommendations under the control of a supervising physician at the healthcare facility when the standard pattern should be expanded. PLO 10. To define necessary terms of employment, leisure, and nutrition based on the final clinical diagnosis, complying with appropriate ethical and legal standards, by making a reasoned decision according to the current algorithms and standard patterns. PLO 11. To define the approach, plan and techniques of keeping physiological pregnancy, physiological birth and a postnatal period by making a reasoned decision according to the current algorithms and standard patterns. PLO 12. To assess the general state of a newborn child by making a reasoned decision according to the current algorithms and standard patterns, complying with appropriate ethical and legal standards. PLO 13. To assess and monitor child's development, provide recommendations on feeding and nutrition depending on the age, to organize preventive vaccinations according to the calendar.

	PLO 14. To determine techniques of providing emergency medical aid (according to list 3) in the context of limited time according to current clinical protocols and treatment standards. PLO 15. To organize the provision of medical care and treatment and evacuation measures to inhabitants and military personnel in emergencies and hostilities, including in the field. PLO 16. To develop rational medical routes of patients; to organize the interaction between colleagues at your and other institutions; to apply tools for promoting medical services on the market based on the analysis of public needs, at a healthcare facility, its divisions, in a competitive environment. PLO 17. To carry out medical manipulations (according to list 5) at a healthcare facility, at home or in the workplace based on the provisional clinical diagnosis and/or patient's condition by making a reasoned decision, complying with appropriate ethical and legal standards. PLO 18. To determine the state of person's life activity functioning and limitations, and the duration of inability to work with preparation of appropriate documents at a healthcare facility based on data on the disease and its course, particularities of person's professional activities, etc. To keep medical documents on patients and the population segment based on statutory documents. PLO 19. To plan and implement the system of anti-epidemic and preventive measures against the emergence and spread of infectious diseases among the population. PLO 20. To analyze the epidemiological state and conduct mass and individual, general and local prevention of infectious diseases. PLO 21. To find necessary information in professional literature and databases; to analyze, assess, and apply this information to solve medical tasks.

	PLO 22. To apply cutting-edge digital technologies, specialized software and statistical methods of data analysis to solve complicated healthcare problems. PLO 23. To assess the environmental impact on human health to define the incidence rate of the population. PLO 24. To organize the required level of individual safety (your own and persons you care for) in case of common dangerous situations occurring in the individual activity area. PLO 25. To render your knowledge, conclusions, and arguments about health and related issues to specialists and non-specialists in a clear and unambiguous manner. PLO 26. To manage healthcare working processes that are complex, unpredictable, and require new strategic approaches; to organize the work and professional development of staff, taking into account acquired skills in efficient teamwork, leadership positions, proper qualities, accessibility and equity, and integrated medical care. PLO 27. To talk fluently in a state language and in English both orally and in written form to discuss professional activities, research, and projects. PLO 28. To make efficient decisions about healthcare problems, assess the required resources; to take into account social, economic, and ethical consequences. PLO 29. To plan, organize, and carry out measures for the specific prevention of infectious diseases, particularly according to the National Calendar of preventive vaccinations, both obligatory and recommended. To manage vaccine residues, organize additional vaccination campaigns, including immunization measures.

1.8. Resource support of program implementation	
Staffing	The implementation of the educational and professional program involves academic staff members who have an appropriate qualification, an academic degree, and/or academic title, as well as a verified level of scientific and professional activities.
Material and technical support	The International Academy of Ecology and Medicine has the necessary material and technical facilities to provide educational activities in the 222 Medicine specialty. The area of classrooms is at least 2.4 sq.m. per person, meeting the Licensing Conditions for Providing Educational Activities. All classrooms are fitted with multimedia equipment (laptops, multimedia projectors with displays, Jamboards, OCULUS QUEST VR headsets, etc.). The Academy features specialized classrooms: Anatomy theater, chemistry classroom, histology classroom, simulation classroom, computer laboratories and foreign language classrooms. Practical skills are worked out at clinical bases that have concluded the relevant agreements with the Academy. Besides, the Academy has a developed social infrastructure: a library with a reading room, paper and electronic sources of literature, food outlets, sports facilities, a dormitory, etc.
Teaching and learning materials	The informational, educational, and methodical support of the Medicine educational program also includes cutting-edge educational technologies, online resources, electronic textbooks, scientific databases, and multimedia tools for efficient student learning. The program also provides access to clinical cases, interactive simulation platforms, and distance learning, enabling students to receive up-to-date information and training in accordance with international medical standards. All participants in the educational process are provided with teaching and learning materials according to the Licensing Conditions for Providing Educational Activities.

	To support the high level of education, one also uses study guides, methodical recommendations, laboratory work, video lectures, and online consultations with lecturers. All of this ensures the integration of theoretical knowledge and practical skills, adapting the learning process to the needs of students and the demands of modern medical practice. Educational activities are conducted according to the curriculum. Each educational component of the curriculum is backed by appropriate teaching materials: working program of the academic discipline, methodological recommendations, etc. The library has the necessary collection of scientific and educational literature in Ukrainian and English: guides, textbooks, and monographs by globally renowned scientists and the Academy academic staff. The Academy also provides access to electronic periodical publications via the e-library and repository. In addition, participants in the educational process have access to electronic specialized periodical publications via the State Scientific and Technical Library of Ukraine (Kyiv) – https://dntb.gov.ua/. The Academy official website contains all necessary information about its activities.
1.9. Academic mobility	
National credit mobility	National credit mobility is based on the Law of Ukraine On Higher Education and contracts/agreements between the International Academy of Ecology and Medicine and Ukraine's higher education institutions (scientific establishments). The national academic mobility program is primarily focused on educational and on-the-job medical practical training of students. One is going to initiate experience exchange programs as part of the Medicine EP for students and the academic staff.
International credit mobility	International academic mobility and re-crediting of learning outcomes are based on the Law of Ukraine On Higher Education, the Regulations on the Organization of the Educational Process at the International Academy of Ecology and Medicine, the Regulations on the Procedure for Exercising the Right to Academic Mobility, the Regulations on the Definition of Credit Transfer and Re-Crediting of Learning Outcomes (of Academic Disciplines), as well as agreements between IAEM and higher education institutions and medical facilities of other countries. To activate academic mobility at the higher education institution, one has established an appropriate structural unit: the Department of Strategic Development and

	International Programs engaged in grants according to Erasmus+ and other international programs. One focuses on the conclusion of agreements between universities and the higher education institution on academic mobility of students and the academic staff.
Training of foreign students	Training of foreign students is conducted according to legislative requirements within the licensed volume.

1. List of components of the educational and professional program and their logical sequence

1.1. List of components of the educational program

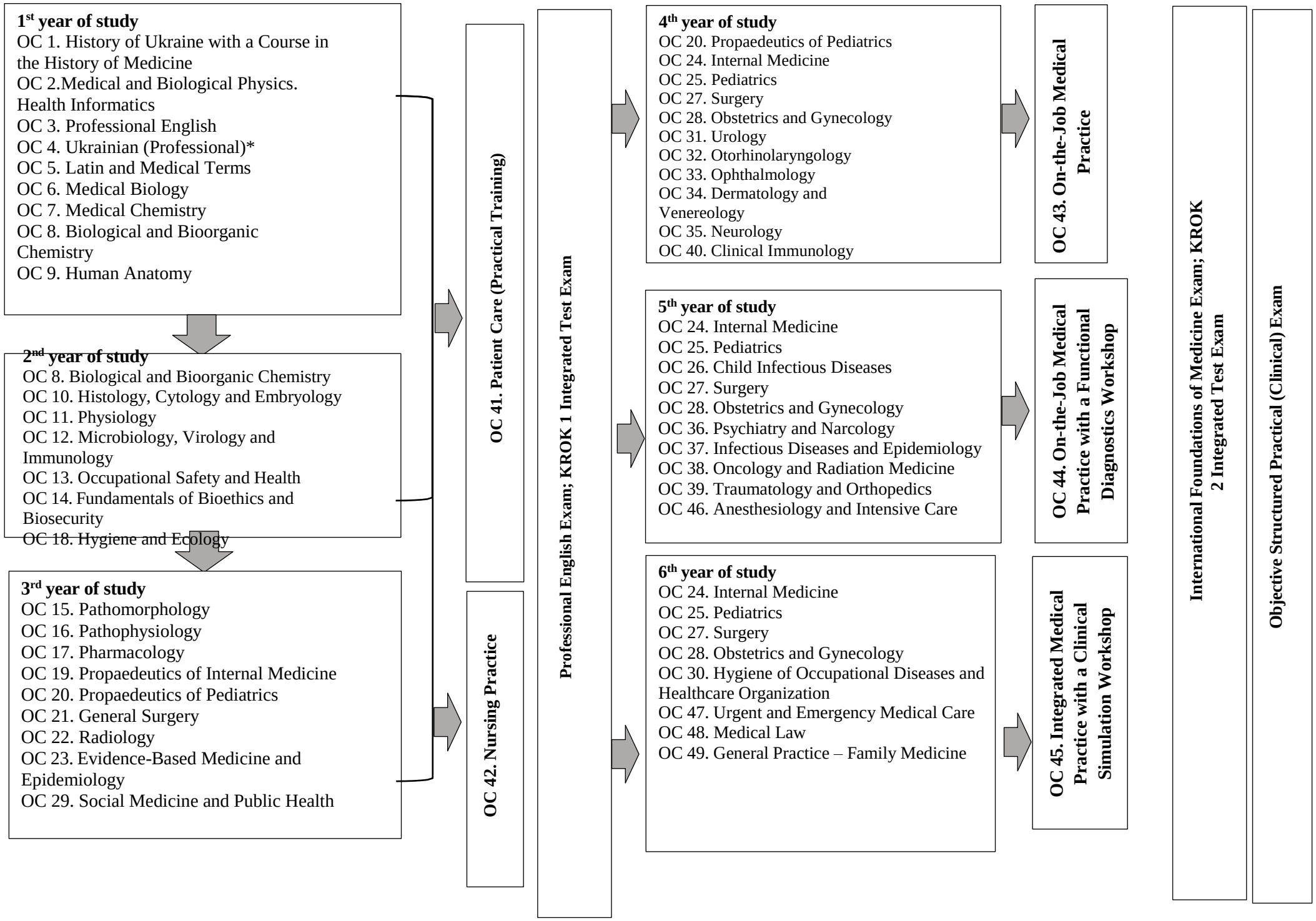
Discipline code	Components of the educational program (academic discipline, practical training)	Number of credits	Form of final control
Obligatory components of the educational program			
Social, humanitarian, and fundamental training			
OC1	History of Ukraine with a Course in the History of Medicine	3	Pass/Fail test
OC2	Medical and Biological Physics. Health Informatics	5	Graded test
	2.1. Medical and Biological Physics	3	
	2.2. Health Informatics	2	
OC3	Professional English	6	Exam
OC4	Ukrainian (Professional)*	3	Exam
OC5	Latin and Medical Terms	3	Graded test
OC6	Medical Biology	5	Exam
OC7	Medical Chemistry	3	Graded test
OC8	Biological and Bioorganic Chemistry	8	Exam
OC9	Human Anatomy	14	Exam
OC10	Histology, Cytology and Embryology	9	Exam
OC11	Physiology	9	Exam
OC12	Microbiology, Virology and Immunology	9	Exam
Total for general training		**77**	
Professional training			
OC13	Occupational Safety and Health	3	Pass/Fail test

OC14	Fundamentals of Bioethics and Biosecurity	3	Pass/Fail test
OC15	Pathomorphology	6	Exam
OC16	Pathophysiology	6	Exam
OC17	Pharmacology	6	Exam
OC18	Hygiene and Ecology	3	Pass/Fail test
OC19	Propaedeutics of Internal Medicine	6	Exam
OC20	Propaedeutics of Pediatrics	6	Exam
OC21	General Surgery	3	Exam
OC22	Radiology	3	Graded test
OC23	Evidence-Based Medicine and Epidemiology	5	Graded test
OC24	Internal Medicine	21	Exam
OC25	Pediatrics	11	Exam
OC26	Child Infectious Diseases	3	Graded test
OC27	Surgery	12	Exam
OC28	Obstetrics and Gynecology	9	Exam
OC29	Social Medicine and Public Health	3	Pass/Fail test
OC30	Hygiene of Occupational Diseases and Healthcare Organization	5	Exam
OC31	Urology	3	Graded test
OC32	Otorhinolaryngology	3	Graded test
OC33	Ophthalmology	3	Graded test
OC34	Dermatology and Venereology	3	Graded test
OC35	Neurology	3	Graded test
OC36	Psychiatry and Narcology	3	Graded test
OC37	Infectious Diseases	7	Exam

OC38	Oncology and Radiation Medicine	3	Graded test
OC39	Traumatology and Orthopedics	3	Graded test
OC40	Clinical Immunology	3	Exam
OC41	Patient Care (Practical Training)	4	Graded test
OC42	Nursing Practice	3	Graded test
OC43	On-the-Job Medical Practice	6	Graded test
OC44	On-the-Job Medical Practice with a Functional Diagnostics Workshop	10	Graded test
OC45	Integrated Medical Practice with a Clinical Simulation Workshop	8	Graded test
OC46	Anesthesiology and Intensive Care	3	Graded test
OC47	Urgent and Emergency Medical Care	3	Graded test
OC48	Medical Law	3	Pass/Fail test
OC49	General Practice – Family Medicine	5	Graded test
Total for professional training		**193**	
Total amount of obligatory components		**270**	
Elective components of the educational program – 90 credits (25.0%)			
Total capacity of the educational program		**360 (100%)**	

* - for foreign citizens, Ukrainian (professional) – Ukrainian as a foreign language

1.2. Structural and logical scheme of the educational program



2. Form of student examination

Form of student examination	The examination of students in the educational and professional program of the 222 Medicine specialty is conducted in the form of the Unified State Qualification Exam (USQE).
Requirements for the Unified State Qualification Exam	The Unified State Qualification Exam is conducted according to the Procedure for the Implementation of the Unified State Qualification Exam for Master's Students in the Public Health Knowledge Area and consists of the following components: • the Krok 1 integrated test exam and professional English exam, which cover the content of fundamental disciplines and are carried out by the State Organization "Testing Board for Professional Competence Assessment of Higher Education Trainees in Medicine and Pharmacy at the Ministry of Health of Ukraine"; • the Krok 2 Integrated Test Exam and the International Foundations of Medicine Exam (clinical disciplines), which cover the content of clinical disciplines and are carried out by the State Organization "Testing Board for Professional Competence Assessment of Higher Education Trainees in Medicine and Pharmacy at the Ministry of Health of Ukraine"; • the Objective Structured Practical (Clinical) Exam (OSPE), which assesses the acquisition of general and special competencies in conditions closest to professional activities and is carried out at IAEM.

3. Matrix of compliance of program competencies with obligatory components of the educational program

Educational components Competencies	OC 1	OC 2	OC 3	OC 4	OC 5	OC 6	OC 7	OC 8	OC 9	OC 10	OC 11	OC 12	OC 13	OC 14	OC 15	OC 16	OC 17	OC 18	OC 19	OC 20	OC 21	OC 22	OC 23	OC 24	OC 25	OC 26	OC 27	OC 28	OC 29	OC 30	OC 31	OC 32	OC 33	OC 34	OC 35	OC 36	OC 37	OC 38	OC 39	OC 40	OC 41	OC 42	OC 43	OC 44	OC 45	OC 46	OC 47	OC 48	OC 49
GC 1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
GC 2	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
GC 3	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
GC 4	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
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GC 9			+		+				+																																									
GC 10	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
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GC 12	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
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PC 1			+	+		+			+	+	+	+		+	+	+			+	+	+	+	+	+	+	+	+	+			+	+	+	+	+	+	+	+	+	+	+	+		+	+		+
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PC 5																	+	+	+	+	+			+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+		+			+
PC 6											+	+			+		+		+	+	+	+		+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+

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

4. Matrix of providing program learning outcomes (PLO) with obligatory components of the educational program

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

PLO 21	+	+				+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
PLO 22		+							+				+								+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+			+			+	+		+
PLO 23						+						+			+			+					+	+		+		+	+	+							+	+		+									+
PLO 24							+	+				+	+				+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+
PLO 25			+	+								+	+	+	+	+			+	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+
PLO 26																														+																			
PLO 27	+		+	+									+	+					+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			+	+	+	+
PLO 28												+		+									+	+			+	+	+	+										+			+		+				+
PLO 29												+													+	+			+								+			+				+					+

Annexes
List 1 (syndromes and symptoms)

1. Amenorrhea;
2. Acromegalia;
3. Anemia syndrome;
4. Anuria and oliguria;
5. Asphyxia;
6. Arterial hypertension;
7. Arterial hypotension;
8. Chest pain;
9. Stomach pain;
10. Extremities and back pain;
11. Perineum pain;
12. Sore throat;
13. Vomiting;
14. Broncho-obstructive syndrome;
15. Bulbar syndrome;
16. Effusion into the pleural cavity;
17. Paranoid-hallucinatory syndrome;
18. Fever;
19. Hemorrhagic syndrome;
20. Hypoglycemia;
21. Hyperglycemia;
22. Exanthem, enanthem;
23. Hepatomegaly and hepatolienal syndrome;
24. Headache;
25. Dysuria;
26. Dysmenorrhea;
27. Dyspepsia;
28. Dysphagia;
29. Diarrhea;
30. Yellow sickness;
31. Breathlessness;
32. Constipation;
33. Dizziness;
34. Child growth retardation;
35. Cardiomegaly;
36. Cough;
37. Intestinal blockage;
38. Coma;
39. External bleeding;
40. Internal bleeding;
41. Blood expectoration;
42. Lactorrhea;
43. Lymphadenopathy;
44. Meningeal syndrome;
45. Uterine bleeding;
46. Edema syndrome;
47. Obesity (+body weight);
48. Paresis, paralyses;
49. Premature sexual development;
50. Tubular bone fractures;
51. Tension pneumothorax (closed);
52. Non-tension pneumothorax (open);
53. Valvular pneumothorax;
54. Polyuria;
55. Portal hypertension;
56. Speech disorders (aphasia);
57. Heart rhythm disorder and cardiac conduction disease;
58. Sudden cardiac arrest;
59. Disorders of consciousness;
60. Itchy skin;
61. Urinary syndrome;
62. Dementia syndrome;
63. Dehydration syndrome;
64. Indigestion syndrome;
65. Thirst;
66. Stridor;
67. Joint syndrome;
68. Convulsions;
69. Weight loss;
70. Cyanosis;
71. Partial or complete loss of vision;
72. Partial or complete hearing loss;
73. Gastrointestinal bleeding.

List 2 (diseases)

1) Diseases of the blood and blood-forming organs, disorders involving the immune mechanism:

1. Anemia;
2. Hemolytic disease of newborns;
3. Hemophilia;
4. Leukemia;
5. Lymphoma;
6. Congenital (Bruton's Disease, Wiskott-Aldrich syndrome) and acquired immunodeficiency disorders;
7. Sepsis of newborns;
8. Surgical sepsis;
9. Idiopathic thrombocytopenic purpura;
10. Chronic radiation injuries.

2) Mental and behavioral disorders:

11. Bipolar affective disorder;
12. Acute psychosis, including alcoholic delirium;
13. Epilepsy;
14. Neurotic disorders;
15. Personality disorders;
16. Schizophrenia.

3) Nervous system diseases:

17. Intracranial trauma;
18. Meningitis, encephalitis;
19. Migraine and other types of headaches;
20. Perinatal encephalopathy;
21. Disorders of the autonomic nervous system;
22. Cerebral circulatory disorders;
23. Vertebrogenic diseases of the nervous system, neuropathy and polyneuropathy;
24. Multiple sclerosis;
25. Chronic occupational injuries (vibration disease, occupational dyskinesias);
26. Strokes (ischemic, hemorrhagic).

Eye diseases

27. Blepharitis;
28. Glaucoma;
29. Conjunctivitis;
30. Foreign body of the visual organ;
31. Injuries of the visual organ;
32. Retinopathy;
33. Exophthalmos

Diseases of the throat, ears, nose

34. Laryngitis;
35. Otitis;
36. Peritonsillar abscess;
37. Sinusitis;
38. Tonsillitis;
39. Injuries of the throat, ears, nose.

4) Diseases of the cardiovascular system:

40. Aortic aneurysms;
41. Atherosclerosis;
42. Varicose veins of the lower extremities;
43. Congenital heart disease;
44. Secondary arterial hypertension;
45. Acute occlusion of the main and peripheral arteries;
46. Endocarditis;
47. Essential and secondary arterial hypertension;
48. Coronary heart disease;
49. Carditis;
50. Cardiomyopathy;
51. Pulmonary heart;
52. Acquired heart defects;
53. Obliterating endarteritis;
54. Pericarditis;
55. Heart rhythm and conduction disorders;
56. Heart failure;
57. Injuries of the heart and blood vessels;
58. Pulmonary embolism;
59. Phlebitis, thrombophlebitis

5) Respiratory and mediastinal diseases:

60. Asphyxia;
61. Bronchial asthma;
62. Bronchitis;
63. Bronchiectasis;
64. Bronchopulmonary dysplasia;
65. Congenital malformations of the respiratory system;
66. Acute respiratory distress syndrome;
67. Respiratory failure;
68. Infectious and destructive lung diseases;
69. Pulmonary insufficiency;
70. Mediastinitis;
71. Cystic fibrosis;
72. Neoplasms of the lungs and mediastinum;
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

6) Diseases of the digestive system:

81. Rectal prolapse;
82. Peptic ulcer disease;
83. Congenital malformations of the digestive system;
84. Gastroesophageal reflux disease, esophagitis;

85. Gastritis, duodenitis;
86. Acute and chronic hepatitis;
87. Acute intestinal obstruction;
88. Acute and chronic appendicitis;
89. Acute and chronic pancreatitis;
90. Benign diseases of the esophagus;
91. Enteritis, colitis;
92. Inflammatory diseases of the rectum and perianal region;
93. Pinched and unstressed abdominal hernias;
94. Neoplasms of the esophagus, stomach, colon, liver and pancreas;
95. Peptic ulcers of the stomach and duodenum;
96. Peritonitis;
97. Perforation of the hollow organ;
98. Liver failure;
99. Malabsorption syndrome;
100. Stenosis of the pylorus of the stomach;
101. Abdominal injuries (superficial, open);
102. Functional gastrointestinal disorders;
103. Diseases of the operated stomach;
104. Cholecystitis, cholangitis, gallstone disease, choledocholithiasis;
105. Cirrhosis of the liver;
106. Gastrointestinal bleeding

7) Diseases of the genitourinary system:

107. Renal amyloidosis;
108. Balanitis, balanoposthitis;
109. Congenital malformations of the urinary system;
110. Glomerulonephritis;
111. Dysmetabolic nephropathy;
112. Nephrotic syndrome;
113. Neoplasms of the kidney, urinary tract and prostate;
114. Pyelonephritis;
115. Prostatitis;
116. Urolithiasis;
117. Tubulointerstitial nephritis;
118. Urethritis;
119. Chronic kidney disease;
120. Cystitis

8) Diseases of the skin and subcutaneous tissue:

121. Allergodermatoses (dermatitis, toxidermia, eczema);
122. Bacterial diseases of the skin and subcutaneous tissue, pyoderma;
123. Purulent-inflammatory diseases of the fingers and hands;
124. Purulent-inflammatory diseases of children and newborns;
125. Mycoses;
126. Burns and frostbite;
127. Parasitic skin diseases (scabies, lice);
128. Psoriasis;
129. Vesicular dermatoses;
130. Specific surgical infection (anaerobic clostridial and non-clostridial)

9) Diseases of the musculoskeletal system and connective tissue:

131. Ankylosing spondylitis;
132. Congenital and acquired malformations of the musculoskeletal system;
133. Acute rheumatic fever;
134. Dermatomyositis and polymyositis;
135. Neoplasms of the musculoskeletal system;
136. Osteoarthritis;
137. Osteomyelitis;
138. Gout;
139. Polytrauma;
140. Reactive arthritis;
141. Rheumatoid arthritis;
142. Systemic scleroderma;
143. Systemic lupus erythematosus;
144. Systemic vasculitis (nodular polyarteritis, hemorrhagic vasculitis, hypersensitive vasculitis);
145. Typical fractures of the bones of the shoulder, forearm, hand, thigh, leg, foot;
146. Pelvic injury;
147. Spinal cord injury;
148. Damage of large joints (hip, knee, ankle, elbow);
149. Chronic rheumatic disease;
150. Juvenile rheumatoid arthritis

10) Diseases of the endocrine system, nutrition and metabolic disorders:

151. Acromegaly and pituitary gigantism;
152. Hypothyroidism;
153. Malnutrition, protein-energy deficiency;
154. Hypopituitarism;
155. Thyrotoxicosis;
156. Endemic goiter;
157. Diabetes insipidus;
158. Nodular goiter, thyroid tumors;
159. Obesity;
160. Congenital dysfunction of the adrenal cortex;
161. Disorders of calcium-phosphorus metabolism, metabolism of vitamin D;
162. Genetic syndromes with endocrine complications: Turner syndrome, Russell-Silver syndrome, Prader-Willi, Laron, etc.;
163. Thyroiditis;
164. Cushing’s disease and syndrome;
165. Chronic insufficiency of adrenal glands;

166. Diabetes mellitus;
167. Hypoparathyroidism;
168. Hyperparathyroidism;
169. Tumors of the adrenal glands;
170. Organic (including congenital) hyperinsulinism;
171. Neuro-endocrine tumors;
172. Pituitary tumors;
173. Premature sexual development;
174. Hypogonadism;
175. Cryptorchidism;
176. Gender differentiation disorder;
177. Klinefelter's syndrome;
178. Dwarfism in a child born SGA

11) Infectious and parasitic diseases:

179. Bacterial food poisoning;
180. Erysipelas;
181. Botulism;
182. Viral hepatitis;
183. Chickenpox;
184. Congenital infections of the newborn;
185. Helminthiasis;
186. Herpesvirus diseases;
187. Influenza and other acute respiratory viral infections;
188. Diphtheria;
189. Infectious mononucleosis;
190. Candidiasis;
191. Pertussis;
192. Intestinal bacterial infections;
193. Intestinal viral infections;
194. Kir;
195. Tick-borne viral encephalitis;
196. Rubella;
197. Leptospirosis;
198. Malaria;
199. Meningococcal infection;
200. Especially dangerous viral infections;
201. Mumps infection;
202. Poliomyelitis;
203. Tetanus;
204. Protozoal infections;
205. Rickettsiosis;
206. Anthrax;
207. Rabies;
208. Scarlet fever;
209. Tuberculosis of different localization;
210. Lyme disease;
211. Human immunodeficiency virus (HIV) disease;
212. Chlamydial infections;
213. Cholera;
214. Plague

12) Infectious diseases transmitted mainly sexually:

215. Gonococcal infection;
216. Syphilis

13) Diseases of the female reproductive system

Pathology of pregnancy:

217. Multiple pregnancy;
218. Vomiting of pregnant women;
219. Pregnancy with extragenital pathology;
220. Fetal distress during pregnancy;
221. Fetal growth retardation;
222. Immune conflict during pregnancy;
223. Molar pregnancy;
224. Placenta previa;
225. Premature separation of the placenta;
226. Premature birth and delayed pregnancy;
227. Ectopic pregnancy;
228. Preeclampsia and eclampsia;
229. Spontaneous abortion

Pathology of childbirth and the postpartum period:

230. Birth activity abnormalities;
231. Pelvic abnormalities, including clinically narrow pelvis;
232. Fetal distress during childbirth;
233. Maternity and postpartum bleeding;
234. Incorrect position and presentation of the fetus;
235. Postpartum septic diseases;
236. Injuries of the uterus and birth canal;

Gynecological diseases:

237. Abnormal uterine bleeding;
238. Ovarian apoplexy;
239. Infertility;
240. Congenital malformations of the female genitalia;
241. Benign dysplasia of the mammary glands;
242. Benign and precancerous neoplasms of the female genitalia;
243. Endometriosis;
244. Inflammatory diseases of the female genitalia;
245. Malignant neoplasms of the female genitalia;
246. Mastitis;
247. Mammary neoplasms.

List 3 (emergencies)

1. Asphyxia (including neonatal);
2. Hypertensive crisis;
3. Hypoglycemia (coma);
4. Acute respiratory failure;
5. Acute urinary retention;
6. Acute adrenal insufficiency;
7. Acute kidney damage;
8. Acute liver failure;
9. Acute heart failure;
10. Acute poisoning, including combat poisons;
11. Acute psychosis;
12. Acute coronary syndrome;
13. Acute radiation and chemical damage, including in the field and in emergencies;
14. Acute cerebral insufficiency;
15. Diabetic coma, including ketoacidotic, hyperosmolar, lactic acidemia;
16. Electric shock;
17. Epileptic status;
18. Acute bleeding;
19. Acute blood loss syndrome, including in the field and in emergencies;
20. Cardiac arrest;
21. Collapse;
22. Impairment of consciousness and comatose states;
23. Renal colic;
24. Biliary colic;
25. Acute anaphylactic reactions;
26. Acute cardiac arrhythmias;
27. Cold injury, including in the field;
28. Thermal injury, including in the field;
29. Venous and arterial thromboembolism;
30. Convulsive syndrome;
31. Drowning;
32. Strangulation asphyxia;
33. Normal childbirth;
34. Shocks;
35. Bites of snakes, insects, animals;
36. Penetrating injuries, including during hostilities;
37. Burns, including in the field;
38. Foreign bodies of the respiratory; tract, gastrointestinal tract, ENT organs and eyes.

List 4 (laboratory and instrumental research)

1. Analysis of pleural fluid;
2. Analysis of ascitic fluid;
3. Analysis of synovial fluid;
4. Zymnytsky's urine test;
5. Nechiporenko's urine test;
6. Alpha-amylase activity in blood and urine, fecal elastase 1;
7. Blood proteins and their fractions, C-reactive protein;
8. Blood glucose, glycosylated hemoglobin;
9. Oral glucose tolerance test;
10. Lipids and lipoproteins of blood and their fractions;
11. Blood hormones;
12. Ferritin, iron and copper of blood serum;
13. Creatinine, urea, blood and urine, glomerular filtration rate;
14. Blood electrolytes;
15. Blood aminotransferases;
16. Total blood bilirubin and its fractions;
17. Coagulogram;
18. Blood uric acid;
19. Alkaline blood phosphatase;
20. Histomorphological examination of lymph node biopsy;
21. Histomorphological examination of the biopsy of parenchymal organs;
22. Histomorphological examination of the biopsy of mucous membranes;
23. Histomorphological examination of muscle and skin biopsy;
24. Histomorphological examination of the placenta;
25. Study of the indoor environment (indicators of microclimate, natural and artificial lighting, bacteriological and chemical air pollution);
26. Study of the external respiration function;
27. Standard ECG (in 12 derivations);
28. Endoscopic examination of the bronchi;
29. Endoscopic examination of the digestive tract;
30. Echocardiography and Doppler sonography;
31. General analysis of feces;
32. General blood test;
33. General analysis of urine;
34. Sugar and acetone in urine;
35. General analysis of cerebrospinal fluid;
36. General analysis of sternal punctate;
37. General analysis of sputum;
38. General immunological profile of blood;
39. Serological reactions in infectious diseases;
40. Express tests on viral diseases;
41. Amplification methods during infectious diseases (PCR, LLR);
42. Serological reactions in autoimmune diseases;
43. Chemical and bacteriological studies of the human environment (air, water, soil);
44. Microbiological study of biological fluids and secretions;
45. Measurement of radiation (sound, vibration, ionizing), individual radiometry;
46. Methods of instrumental visualization of the thyroid gland;
47. X-ray contrast angiography;
48. Methods of instrumental visualization of abdominal organs;
49. Methods of instrumental visualization of the thoracic cavity;
50. Methods of instrumental visualization of the genitourinary system;
51. Methods of instrumental visualization of the fetus;
52. Methods of instrumental visualization of the skull, spine, spinal cord, bones and joints;
53. Methods of instrumental visualization of the breast;
54. Tuberculin diagnosis;
55. Multi-moment fractional study of bile and pH-metry of the stomach and esophagus;
56. Chemical, organoleptic, bacteriological examination of food and drinking water;
57. Cytological examination of the cervix;
58. Measurement of ergonomic indicators of difficulty and intensity of work.

List 5 (medical manipulations)

1. To perform indirect heart massage;
2. To perform artificial respiration;
3. To perform defibrillation using a manual automatic defibrillator-cardioverter;
4. To register standard ECG in 12 derivations;
5. To temporarily stop external bleeding;
6. To carry out primary surgical treatment of the wound, bandage, removal of skin sutures, including in the field;
7. To apply hemostatic tourniquets and use hemostatic agents, including in the field;
8. To set a nasal gastric and orogastric tube;
9. To carry out transport immobilization;
10. To administer drugs (intravenous jet and drip, intraosseous), including in the field;
11. To provide peripheral venous access;
12. To measure blood pressure;
13. To restore airway patency;
14. To conduct the urinary catheterization with a soft probe;
15. To perform anterior nasal tamponade;
16. To carry out a clinical examination of the visual organ and ENT organs;
17. To perform the technique of newborn's skin-to-skin contact and early breastfeeding attachment;
18. To carry out finger research of a rectum and using a rectal mirror;
19. To perform a finger examination of the prostate;
20. To carry out a clinical examination of the mammary glands;
21. To perform a pleural puncture;
22. To perform a puncture of the abdominal cavity through the posterior arch;
23. To determine blood groups, rhesus affiliation;
24. To transfuse blood components and blood substitutes;
25. To perform bimanual examination and examination of women in mirrors;
26. To perform pelviometry;
27. To carry out external (Leopold's maneuvers) and internal obstetric examination;
28. To carry out fetal auscultation;
29. To take smears for bacterioscopic, bacteriological and cytological examination;
30. To palpate the thyroid gland;
31. To examine and assess the external genitalia of boys;
32. To assess the state of sexual development of children.