



Approved by the
decision of the Board of Directors
«Astana Medical University» JSC,
Minutes No. 9
dated «8» August 2025



EDUCATIONAL PROGRAM

6B10123 «Medicine»

Developed in accordance with the State Mandatory Standard and the typical professional curricula for medical and pharmaceutical specialties

Discussed at the EPC Medicine meeting


Protocol No. 9 dated "30" June 2025

Chairperson  Kulzhanova Sh.A.

Approved at the Academic Council meeting

Protocol No. 7/1 dated «21» July 2025

Chairperson  Zhunusova A.B.

	«Astana Medical University» JSC	OP-AMU-25 Edition No. 1 Page 3 of 17
	Educational Program 6B10123 «Medicine»	

1. Educational Program Passport

Field of Education	6B10 Healthcare
Training Direction	6B101 Healthcare
Group of Educational Programs	BM086 Medicine
Educational Program	6B10123 «Medicine»
Purpose of the Educational Program	Training qualified healthcare professionals within an integrated medical education program based on learning outcomes, ensuring the development of clinical reasoning, practical skills, scientific culture, and professional responsibility.
Type of Educational Program	New EP
Qualification Level According to the National Qualifications Framework	7
Qualification Level According to the Sectoral Qualifications Framework	7
Distinctive Features of the Educational Program	-
Awarded Academic Degree	Master
Study Period	6 years
Mission of the Educational Program	Training of highly qualified specialists of the new generation based on the integration of education, science, and practice <i>Reviewed, discussed, and approved at the COC meeting of the "General Medicine" specialty. Protocol No. 6, dated 21.06.2023</i>
Accreditation and Certification of the Educational Program	Certificate of International Specialized Accreditation ECAQA, No. SA00311, accreditation period: 27.06.2024 – 26.06.2029
Entry Requirements for Applicants	General secondary education, technical and vocational education, post-secondary medical education, or higher education
Professional Standards (Career Enbek)	General Medical Practice, Family Medicine
Graduate Qualification Profile	
List of Specialist Positions	Potential employers of the graduates of the educational program are representatives of all healthcare sectors of the Republic of Kazakhstan
Field of Professional Activity	Healthcare and Social Services
Professional Functions	Outpatient care, management and dynamic monitoring of pediatric and adult patients, disease prevention and early detection, assessment of temporary and permanent disability; Conducting primary care activities; Providing emergency and urgent medical care; Participation in medical documentation and medical-statistical information management; Continuous professional development
Types of Professional Activity	Diagnostic, therapeutic, consultative, preventive, urgent

2. Graduate Competencies and Learning Outcomes

2.1 Competencies and Learning Outcomes of the Educational Program

№	Competencies		LO
	General Competencies		№ ОК
1	Medical Knowledge	Демонстрирует и применяет на практике знания в области биомедицинских, клинических, эпидемиологических и социально-поведенческих наук, включая общепринятые, развивающиеся и постоянно обновляемые знания	PO 1
2	Communication	Демонстрирует межличностные и коммуникативные навыки, приводящие к эффективному обмену информацией и сотрудничеству с пациентами, их семьями и медицинскими работниками, в том числе с использованием информационных технологий	PO 2
	Professional Competencies		№ С
3	Clinical Skills	3.1 Demonstrates skills in patient examination, medical history taking, physical examination, identification of key symptoms and syndromes of diseases affecting various organs and systems, and planning appropriate diagnostic procedures.	PO 3
		3.2 Demonstrates skills in interpreting the results of laboratory, functional, and instrumental diagnostic methods for the diagnosis, treatment, and prevention of diseases affecting various organs and systems	PO 4
		3.3 Able to formulate a clinical diagnosis, develop a treatment and prevention plan, and assess its effectiveness based on evidence-based practice to ensure effective patient-centered care at all levels of healthcare delivery	PO 5
		3.4 Able to evaluate risks and apply the most effective methods of diagnosis, treatment, and prevention based on the principles of evidence-based medicine to ensure a high level of safety and quality in medical care	PO 6
4	Regulatory Knowledge	Able to act within the regulatory and legal framework of the healthcare system of the Republic of Kazakhstan within their specialty, performing professional medical activities in accordance with applicable laws, regulations, and ethical standards to ensure optimal medical services.	PO 7
5	Professionalism	Able to develop a treatment plan according to the clinical situation, provide basic and emergency medical care, including first aid and care in emergency situations.	PO 8
6	Research	Able to formulate research questions, critically evaluate scientific publications, effectively use international databases in daily practice, and participate in the work of a research team.	PO 9
7	Personal and Professional Development	Able to engage in self-directed learning and train other members of the professional team to maintain continuous personal and professional growth, actively participating in discussions, conferences, and other forms of ongoing professional development.	PO 10

2.2 Learning Outcomes

№	Code	Learning Outcomes	Corresponding Work Functions
1	ON1	Applies knowledge in biomedical, clinical, epidemiological, and social-behavioral sciences, including established, emerging, and continuously updated knowledge, in solving professional tasks.	In accordance with Appendix 28 to the Order of the Minister of Health of the Republic of Kazakhstan dated January 25, 2024, No. 46:
2	ON2	Performs effective professional interaction with patients, their families, and healthcare professionals using interpersonal and communication skills, including the use of information technologies.	Work Function 2: Conducting primary care activities
3	ON3	Conducts medical history taking and physical examination, identifies key symptoms and syndromes of diseases affecting various organs and body systems, and formulates a diagnostic plan.	Work Function 1: Outpatient care, management, and dynamic monitoring of pediatric and adult patients, disease prevention and early detection, assessment of temporary and permanent disability.
4	ON4	Interprets the results of laboratory, functional, and instrumental investigations for the diagnosis, treatment, and prevention of diseases of various organs and body systems.	Work Function 1: Outpatient care, management, and ongoing monitoring of pediatric and adult patients, disease prevention and early detection, assessment of temporary and permanent disability.
5	ON5	Formulates clinical diagnoses, develops treatment and prevention plans, and evaluates their effectiveness based on evidence-based medicine to ensure patient-centered care at all levels of healthcare delivery.	Work Function 1: Outpatient consultation, management, and dynamic monitoring of pediatric and adult patients, disease prevention and early detection, assessment of temporary and permanent disability.
6	ON6	Assesses risks and applies the most effective methods of diagnosis, treatment, and prevention based on the principles of evidence-based medicine to ensure a high level of safety and quality of care at the primary healthcare level.	Work Function 2: Conducting district-level medical practice
7	ON7	Performs professional activities in accordance with the regulatory and legal framework of the healthcare system of the Republic of Kazakhstan, taking into account applicable laws, regulations, and ethical standards.	Work Function 4: Participation in the management of medical documentation and medical-statistical information
8	ON8	Prescribes treatment according to the clinical situation and provides basic and emergency medical care, including first aid and care in emergency situations.	Work Function 3: Providing emergency and urgent medical care
9	ON9	Formulates research questions, critically appraises scientific publications, effectively uses international databases in professional practice, and participates in research team activities.	Additional Work Function 1: Continuous professional development
10	ON10	Engages in self-directed learning and contributes to the training of other members of the professional team, actively participating in discussions, conferences, and other forms of continuous professional development.	Additional Work Function 1: Continuous professional development

12 Management and Psychology of Administration	<p>The course is designed to equip future specialists with knowledge and skills for effective management in medical organizations, taking into account the psychological aspects of interaction. It covers the fundamentals of managerial activities, leadership styles, staff motivation, decision-making methods, and the psychological characteristics of human behavior within a team. Special attention is given to developing leadership qualities, managing stress and conflicts, and enhancing the efficiency of teamwork and communication in healthcare. Additionally, the course emphasizes the formation of values related to inclusion and sustainable development, ensuring safety, and adhering to principles of environmental responsibility. A key component is the consideration of modern digital technologies and the application of artificial intelligence in the management of medical organizations, which supports informed decision-making and improves the quality of healthcare delivery.</p>	BD	UC	3					
13 Evidence-Based Medicine and Clinical Epidemiology	<p>The course is designed to develop medical students' comprehensive understanding of the principles of modern evidence-based medicine. It covers methods for evaluating epidemiological data, as well as approaches to making clinical decisions based on critical assessment of medical literature and research findings.</p> <p>The knowledge gained enables future physicians to effectively apply evidence-based approaches in diagnosis and treatment, consider individual and population risk factors, analyze clinical research data, and integrate it into their practice. The course fosters the development of analytical thinking, scientific reasoning, and responsibility in medical decision-making.</p>	BD	UC	6					
14 Medical Microbiology, Virology, and Parasitology	<p>The course studies the morphological and biological properties of microorganisms, their mechanisms of interaction with the host organism, routes of transmission, and the pathogenesis of infectious diseases. This knowledge is essential for further mastering clinical disciplines, understanding the mechanisms of infectious disease development, and for their diagnosis, prevention, and treatment.</p>	BD	UC	6					
15 Molecular Biology and Medical Genetics	<p>The course studies the molecular mechanisms of intracellular processes in both normal and pathological conditions, the molecular-genetic mechanisms regulating the cell cycle, genetic mechanisms of apoptosis, intercellular signaling substances, fundamentals of general genetics, developmental genetics, teratogenesis, congenital malformations, types of trait inheritance, human hereditary diseases, medical-genetic counseling, principles of molecular-genetic diagnostics, and principles of treatment and prevention of hereditary diseases. This knowledge serves as a foundation for the effective study of advanced, specialized disciplines.</p>	BD	UC	5					
16 Morphology and Physiology of Skin, Musculoskeletal.	<p>The course studies the anatomy of the skin, musculoskeletal, nervous, and endocrine systems, which is essential for further understanding the anatomical structure, histological organization, and physiological processes of other organs and systems, mastering basic and clinical disciplines, determining the</p>	BD	UC	12					

22	Pathology of Organs and Systems	The course examines the etiology and pathogenesis of major clinical syndromes in functional and organic pathologies of the respiratory, cardiovascular, hematopoietic, nervous, digestive, genitourinary, endocrine, and musculoskeletal systems, as well as the skin and its appendages, taking into account age-related reactivity of the body. It provides essential knowledge for the effective study of specialized medical disciplines, understanding the mechanisms of disease development, and the principles of diagnosis and therapy. The course also addresses the pharmacodynamics of drugs to ensure rational selection of medications for various diseases, including appropriate therapeutic and preventive use in specific clinical situations.	BD	UC	17	+												
Cycle of basic disciplines																		
A cycle of basic disciplines. Elective component																		
23	Basic Operative Surgical Skills	The course studies the main pathological changes in the human body and the development of surgical pathology, examines the primary methods of surgical correction and tissue and organ restoration, and develops fundamental operative surgical skills.	BD	EC	3	+												
24	Artificial Intelligence in Medicine	The course is aimed at equipping students with the knowledge and skills necessary to understand, develop, and apply artificial intelligence (AI) technologies, providing a clear understanding of key AI concepts and principles such as machine learning, neural networks, and natural language processing. Special attention is given to the potential applications of AI in medicine and healthcare. The course provides an overview of the fundamental principles, methods, and application areas of artificial intelligence. The emphasis is on mastering core concepts rather than learning specific software tools or programming languages, which allows students to develop a broad perspective on the field and prepares them to adapt to technological changes.	BD	EC	3	+												
25	Organization of Vaccination Work	The course addresses the organization and implementation of preventive vaccination programs for the population, including familiarization with vaccination clinic documentation, immunobiological preparations, vaccination reactions, and post-vaccination complications. It also covers issues related to the storage and transportation of vaccines, as well as the monitoring, evaluation, and analysis of vaccination activities.	BD	EC	3	+												
26	Fundamentals of Biosafety in Healthcare Institutions	The course examines biosafety issues in healthcare institutions, including the assessment of infection risks associated with medical care and the prevention of nosocomial infections. It covers regulatory documents governing biosafety in healthcare. Special attention is given to administrative measures for ensuring biosafety, environmental monitoring, personal protection of staff and patients, and the analysis of the effectiveness of anti-epidemic interventions..	BD	EC	3	+												
Cycle of basic disciplines																		
A series of basic disciplines. Professional practice.																		

27	Educational-Industrial Practice: "Physician Assistant"	The course focuses on systematizing theoretical knowledge and consolidating practical skills in communication and medical care for common human diseases.	BD	UC	2		+	+	+	+	+	+	+						
Cycle of Specialized Disciplines – University Component																			
28	Internal Medicine in Inpatient Care	The course examines the etiology, pathogenesis, clinical features, diagnostics, communication, and treatment principles of major internal medicine diseases.	Specialized Disciplines (SD)	UC	14		+	+	+	+	+	+	+						
29	Pediatric Infectious Diseases	The course covers the etiology, pathogenesis, and clinical manifestations of pediatric infectious diseases, including patient communication, physical examination of the patient, diagnostic methods, interpretation of examination results, treatment strategies, and disease prevention.	SD	UC	3		+	+	+	+	+	+	+						
30	Infectious Diseases	The course examines the etiology, pathogenesis, epidemiology, and clinical manifestations of infectious diseases, including patient communication, physical examination, diagnostic methods, interpretation of examination results, differential diagnosis and treatment, emergency care, disease prevention, interprofessional teamwork, conducting research, and continuous professional development.	SD	UC	4		+	+	+	+	+	+	+						
31	Clinical Neurology and Psychiatry, Oncology	The course addresses current issues in anatomy, semiotics, and clinical manifestations of nervous system disorders, outcomes of mental and behavioral disorders, oncology, diagnostic methods, communication, interpretation of examination results, differential diagnosis and treatment, emergency care, prevention of major neurological, psychiatric, and oncological diseases, organization of psychiatric and oncological care for the population, aspects of organizing the oncology service in the Republic of Kazakhstan, screening, clinical manifestations of oncological diseases of various localizations in adults and children, communication skills, examination techniques, result interpretation, and interprofessional team collaboration.	SD	UC	12		+	+	+	+	+	+	+						
32	Neurology in General Practice	The course studies the etiology, pathogenesis, semiotics, and clinical manifestations of nervous system diseases, physical examination of the patient, diagnostic methods, interpretation of examination results, differential diagnosis and treatment, provision of emergency care, and disease prevention.	SD	UC	3		+												
33	Emergency Conditions in General Practice	The course covers the diagnosis of emergency conditions and the algorithms for providing emergency care in the practice of a general practitioner.	SD	UC	5		+												
34	General Medical Practice	The course examines the clinical manifestations of diseases of internal organs in both adult and pediatric populations, outpatient and polyclinic care for adults and children, the diagnosis and treatment of the most common surgical diseases at the primary health care level, and the provision of qualified surgical care in outpatient, day-hospital, home, and non-institutional settings, in both emergency and planned formats. It also covers the diagnosis, clinical management, and	SD	UC	23		+	+	+	+	+	+	+						

