



EDUCATIONAL PROGRAM

Educational program code: 8D10141
Name of the educational program: Medicine
Level of the educational program: Doctorate

Shymkent, 2022 y.



The educational program was developed by the members of the CEP:

Head of the Department of Biology and Biochemistry c.m.s., professor

Yessirkeпов M. M. *M.M.*

Agreed with employers:

Head of the Department of Infectious Diseases and Dermatovenerology c.m.s., professor

Abuova G. N. *G.N.*

Head of the Department of Neurology, psychiatry, rehabilitation and neurosurgery c.m.s., professor

Zharkinbekova N. A. *N.A.*

Head of the Department of Surgery-2 d.m.s., Acting Professor

Abdurakhmanov B. A. *B.A.*

Chairman of the CEP «Medicine»

Protocol № 11 05 08 2022 y.

Dosybaeva G. N. *G.N.*

Approved by the Scientific Council

Vice-Rector by SCW

Protocol № 5a 08 08 2022 y.

Nurmashev B. K. *B.K.*

Approved by the Academic Council

Protocol № 15 08 08 2022 y.



Passport of the educational program

1. Mission of the educational program: Development of the national health care system through the training of competitive scientific and pedagogical personnel capable of generating ideas, demonstrating leadership, developing strategies and solving complex problems in the field of medical education, science and practice.

2. The purpose of the educational program: To train personnel for the scientific, pedagogical and/or professional field of activity, with the award of the degree of Doctor of Philosophy (PhD), who are able to make informed decisions through independent scientific research, the implementation of which will make a significant contribution to the development of medicine.

3. Rationale for the educational program: Need in the labor market: the educational program is focused on healthcare professionals who are able to conduct scientific research and implement organizational and management technologies to solve complex problems of protecting public health and developing an effective health care system in Kazakhstan.

4. Professional standard on the basis of which the educational program has been developed:

Regulatory documents for the development of an educational program

- Order of the Minister of Science and Higher Education of the Republic of Kazakhstan «On Approval of State Compulsory Standards of Higher and Postgraduate Education» dated July 20, 2022 No. 2.
- Order of the Minister of Health of the Republic of Kazakhstan «On Approval of State Compulsory Standards for the Levels of Education in the Field of Healthcare» dated July 4, 2022 No. KR DSM-63.
- Order of the Minister of Education and Science of the Republic of Kazakhstan «On Approval of the Rules for the Organization of the Educational Process on Credit Technology of Training in Higher and (or) Postgraduate Education Organizations» dated April 20, 2011 No. 152.
- Law of the Republic of Kazakhstan «On Education» dated July 27, 2007 No. 319-III (as amended on 04.07.2022)
- Order of the Minister of Education and Science of the Republic of Kazakhstan «On Approval of the Model Rules for the Activities of Higher and Postgraduate Education Organizations» dated October 30, 2018 No. 595 (as amended on 29.12.2021)
- «Regulations on the Procedure and Procedures for the Development of Educational Programs» of JSC «SKMA» dated 29.05.2019.

- Internal regulatory documents of JSC «SKMA»

5. The field of professional activity: Health care organizers, heads of state and non-state medical and non-medical institutions. Research activities in universities.

6. The object of professional activity: Organizations of health care management, organizations of health care and social security, organization of higher and postgraduate education, organization of science.

Types of professional activity:

- organizational and managerial;
- scientific and research activities.
- education (pedagogical)

General information

№	Characteristics of the EP	Data
1	Registration Number	8D10100017
2	Code and classification of the field of education	8D10 Health care
3	Code and classification of the field of study	8D101 Health care
4	Group of Educational Programs	D141 Medicine
5	Code, name of the educational program	8D10141 Medicine
6	Type of EP	New EP
7	ISCED level	8
8	NQF level	8
9	IQF Level	8
10	Distinctive features of the EP	No
	Partner University (JEP)	-
	Partner University (DDEP)	-

11	List of competencies	<p>Key competencies of the graduate of the program:</p> <p>KC1 Health Care Methods.</p> <p>KC2 Population health and its physical, radiological, chemical and biological-environmental determinants.</p> <p>KC3 Health promotion: health education, health protection and disease prevention.</p> <p>KC4 Ethics.</p>
12	Learning Outcomes	<p>LO1 Uses a special knowledge to critically analyze, evaluate, and synthesize new, complex ideas that are at the very forefront position in public health service.</p> <p>LO2 Able to conduct independent research and can work for a scientific result, has a sustained interest in developing of new ideas and projects which will lead to appearance of the new technologies in the health care area.</p> <p>LO3 Generates ideas, predicts the results of innovation, cooperates in promotion in academic and professional context of technological, social or knowledge based cultural development of society.</p> <p>LO4 Demonstrates self-awareness skills, commitment to learning throughout life and experience for teaching at the level of higher and postgraduate education.</p> <p>LO5 Participates in nuncupative or in writing professional discussions, publishes research results in international academic publications.</p> <p>LO 6 Demonstrates a systematic understanding of public health service in the field of its qualifications, have a grip on research methods used in this direction.</p> <p>LO7 Demonstrates leadership qualities, innovativeness and independency in work and study activities in new contexts that require the solution of problems linked by many interrelated factors.</p> <p>LO8 Capable to communicate on topics in his field of competence with equal status person, with the broad scientific community and society in general.</p>

13	Form of study	In-person
14	Language of instruction	Kazakh, Russian
15	Amount of loans	180
16	Degree Awarded	Doctor of Philosophy (PhD) in the educational program 8D10141 «Medicine»
17	Duration of training	3 years
18	Availability of an appendix to the license for the direction of personnel training	KZ36LAA00011387 (020)
19	Availability of EP accreditation	Yes
	Availability of EP accreditation	Independent Agency for Accreditation and Rating (IAAR)
	Accreditation Certificate No., Accreditation Validity Period	№AB 3518, 27.05.20221y. – 26.05.2026y.
20	Information about disciplines	Annex 1.2

Annex 1

Matrix of correlation of learning outcomes in the educational program as a whole with the competencies being formed

	LO1	LO2	LO3	LO4	LO5	LO6	LO	LO8
KC1								
KC2								
KC3								
KC4								

Annex 1.2

Competency attainability/learning outcomes matrix

№	Name of discipline	A brief description of the discipline	Cycle (BD, PD)	Component (UC, OC)	Number of credits	Generated LO (codes)
The cycle of basic disciplines					23	
1-Module:(Modern educational technologies and statistical methods of analysis)						
1	Biostatistics (advanced course)	Elements of measurement theory. Methods of comparison and analysis of statistical aggregates. Nonparametric test. Method of standardization, its meaning and application. Statistical packages SPSS, SAS, Stata using computer statistical programs. Statistics on the health of the population. Statistics of the health system. Development and application of statistical methods for planning and analysis of biomedical research. Modeling opportunities in health care.	BD	UC	4	LO1 LO6
Optional component						
2	Educational technologies in universities	Normative legal acts of the education system. The concept and essence of educational technologies. Classification of educational technologies. Types and forms of educational technologies. Methods and principles of organizing education in higher education. Innovative teaching methods in higher education. Distance learning	BD	OC	4	LO4 LO7 LO8

		technologies. Pedagogical taxonomies. Features of educational technologies in the training of medical personnel.				
3	Epidemiological and clinical-genetic analysis of Parkinson`s disease, Huntington's chorea, ataxia and dystonia	The relevance of the epidemiological study of Parkinson`s disease, Huntington`s chorea, ataxia and dystonia. Epidemiological features and processing of data analysis of epidemiological studies in Parkinson`s disease, Huntington`s chorea, ataxia and dystonia. Optimization of the organization of the system of therapeutic and preventive care for patients with Parkinson`s disease and other motor disorders. DNA analysis of the role of trinucleotide repeats and LRRK2 G2019S in the development of movement disorders.	BD	OC	4	LO1 LO3 LO6 LO7
4	Problems of childhood infections	Particularity of the organization of assistance to the child population in infectious diseases. Using of special knowledge for the critical analysis, evaluation and synthesis of the algorithm for differential diagnosis, classification, tactics of treatment, rehabilitation and prevention of infectious diseases in children. Intensive care for emergency conditions as recommended by WHO. Skills and research methods used in the quarantine activities in children`s institutions.	BD	OC	4	LO1 LO3 LO7
5	Teaching practice	Develops and organizes classes with undergraduates (students) (at least 10 classes). Participates in and analyzes the training sessions conducted by the teachers of the department. Participates and analyzes scientific and	BD	UC	10	LO4

		methodological seminars and conferences. Conducts practical activities with students in a scientific circle. Compiles articles of scientific and methodological nature. Prepares a report on scientific and pedagogical practice.				
Cycle of profile disciplines						
6	Modern methods and principles of scientific research	Fundamentals of national and international law in the field of scientific research. The order and principles of ethical regulation of research in the field of health. Conducting scientific and research programs by funding sources. Search and attraction of grants from domestic and foreign donor funds. Writing research projects and preparing grant applications.	PD	UC	4	LO4 LO5 LO6 LO7
7	Ethics in scientific activity	Ethics of science, or scientific ethics, covers the moral aspect of the activity of a scientist and science as a public institution. Its content is primarily determined by the specifics and social purpose of the scientific activity itself, which consists in producing knowledge.	PD	UC	4	LO3 LO4
Optional component						
8	Scientific communication: oral and written	Communication in science. Types and forms of professional communication in the scientific community. Means of information exchange and communication. Dialogue in the scientific community. Scientific discussion concept. Rules for conducting a scientific discussion. Types of written communication. Forms of scientific publications in the field of health care. Formation of the structure of a scientific article and thesis.	PD	OC	4	LO5 LO8

		Review procedure.				
9	Surgery of biliopancreatoduodenal zone	Medical and social significance of the problem of diseases of the biliopancreatoduodenal zone. Causal relationships of liver, pancreas and extrahepatic bile ducts. Highly qualified approach to the prevention and treatment of biliopancreatoduodenal diseases zone based on the assessment of evidence-based data.	PD	OC	4	LO1 LO4 LO6
10	Zoonotic infections	Critical analysis, assessment and synthesis of changes from various systems and organs, severity criteria. Diagnostic. Differential diagnosis. Treatment. Indications for hospitalization. Rehabilitation. Prevention. Curative measure in the foci of infection. Publication of research results in the field of zoonotic infections.	PD	OC	4	LO1 LO5
11	Atrophy of the brain and spinal cord in multiple sclerosis	Dynamic and comparative epidemiological studies of brain neurodegenerative processes in multiple sclerosis. Methods for diagnosing atrophy of the brain and spinal cord: postprocessing image processing, calculating the volume of the anatomical structures of the brain (morphometria). Correlation of the volume of the cortex with the assessment of ventricular volumes and neurological disorders. Optimization of the use of atrophy parameters as a tool for assessing the effectiveness of therapy.	PD	OC	4	LO1 LO5 LO6
12	Post-stroke neuropsychiatric disorders	Epidemiology of post-stroke neuropsychiatric disorders. Clinical neuroimaging correlations in post-stroke cognitive impairment. The mechanism of development of	PD	OC	4	LO6 LO7 LO8

		post-stroke neuropsychiatric disorders. Neuropsychological profile in patients with cognitive defect, in patients after stroke. General principles of neuropsychological rehabilitation in patients with post-stroke neuropsychiatric disorders.				
3-Module: (Management of scientific research and scientific projects and ethical principles of scientific research)						
Optional component						
13	Project management	The discipline «project management» is a methodology for achieving success using modern scientific methods to achieve optimal results in terms of cost, time and quality, as well as meeting the interests of all project participants. In other words, the art of leadership in coordinating the efforts of people and using resources.	PD	OC	5	LO1 LO2
14	Emergency conditions in the practice of infectious diseases	Conduct independent research and work on the scientific result in various types of shocks. Causative agents of infectious diseases, which causing the development of shock. Infectious diseases in which shock most often develops. Pathogenetic stages in emergency conditions. Clinical stages of emergency situations. Clinical symptoms of various stages of shock. Publication of research results on the treatment of shock states.	PD	OC	5	LO2 LO5 LO6
15	Ischemic stroke at a young age	Epidemiological features of stroke at a young age in the southern region of Kazakhstan. Verification of the diagnosis using CT and MRI in young people. Stratification of causes of stroke in accordance with the recommendations of TOAST.	PD	OC	5	LO1 LO6 LO8

16	Clinical and electrophysiological aspects of facial pain	Analysis of the quality of life of patients with facial pain. Clinical and psychological characteristics and quality of life of patients with FP. Neurophysiological characteristics of FP with using the registration of electroencephalogram (EEG) and evoked potentials (EP) of the brain, trigeminal and skin sympathetic potentials of the brain. Comparative physiologic patterns of FP and trigeminal neuralgia.	PD	OC	5	LO1 LO5 LO6 LO8
17	Neuropsychological Disorders in the Early Stage of Parkinson's Disease	Comparative evaluation of the characteristics of affective and cognitive impairment in the early stage of Parkinson`s disease. The nature and severity of emotional and affective disorders in the early stages of PD. Neuropsychological testing to identify the level of personal and reactive anxiety of depressive symptoms, intellectual and mental disorders, analysis of the level of motivation and assessment of quality of life.	PD	OC	5	LO1 LO2
18	Research practice	Forms professional competencies necessary for independent scientific and practical activities. The dissertation research uses modern methods of scientific research, data processing and interpretation, consolidates practical skills by studying the latest theoretical, methodological and technological achievements of domestic and foreign medical sciences.	PD	UC	10	LO5
Research work					123	
19	Research work of a doctoral student, including an	Conducting independent research and working on scientific results. Forecasting the results of innovation activities. Analysis, evaluation and synthesis of new	PD	OC	123	LO1 LO2 LO3 LO4 LO5 LO6

	internship and a doctoral dissertation	complex ideas. Publication of research results in international academic publications.				LO7 LO8
Final examination					12	
20	Writing and defending a doctoral dissertation	Assessment of learning outcomes and key competencies achieved upon completion of the study of the doctoral program.			12	LO1 LO2 LO3 LO4 LO5 LO6 LO7 LO8
TOTAL					180	

A matrix for achieving LO using various learning methods

LO	Teaching and learning methods	
LO1 Uses a special knowledge to critically analyze, evaluate, and synthesize new, complex ideas that are at the very forefront position in public health service.	Conducting discussions on current topics in healthcare, feedback from a doctoral student	Solving situational problems, oral interview
LO2 Able to conduct independent research and can work for a scientific result, has a sustained interest in developing of new ideas and projects which will lead to appearance of the new technologies in the health care area.	Development and conduct of scientific research	Practical implementation of research analysis in the field of healthcare
LO3 Generates ideas, predicts the results of innovation, cooperates in promotion in academic and professional context of technological, social or knowledge based cultural development of society.	Conducting seminars, working in groups for the technological, social or cultural development of society	Assignment for doctoral students to independently choose topics for research
LO4 Demonstrates self-awareness skills, commitment to learning throughout life and experience for teaching at the level of higher and postgraduate education.	Discussion of tasks for teamwork and case studies	Working in groups
LO5 Participates in nuncupative or in writing professional discussions, publishes research results in international academic publications.	Conducting seminars and discussions, feedback from the doctoral student	Solving situational problems, oral interview
LO6 Demonstrates a systematic understanding of public health service in the field of its qualifications, have a grip on research methods used in this direction.	Publication in scientific publications	Writing abstracts, scientific articles Public appearances
LO7 Demonstrates leadership qualities, innovativeness and independency in work and study activities in new contexts that require the solution of problems linked by many interrelated factors.	Implementation of learning in the process of solving problems by delegating tasks to doctoral	Solving situational problems, oral interview

	students with the assignment of leadership functions to them	
LO8 Capable to communicate on topics in his field of competence with equal status person, with the broad scientific community and society in general.	Conducting seminars and discussions, feedback from the doctoral student	Conducting communication skills, discussion

The matrix of compliance of LO with assessment methods

LO	Assessment methods	
LO1 Uses a special knowledge to critically analyze, evaluate, and synthesize new, complex ideas that are at the very forefront position in public health service.	Summary/presentation	Testing
LO2 Able to conduct independent research and can work for a scientific result, has a sustained interest in developing of new ideas and projects which will lead to appearance of the new technologies in the health care area.	Work control	Research activities
LO3 Generates ideas, predicts the results of innovation, cooperates in promotion in academic and professional context of technological, social or knowledge based cultural development of society.	Projects	Publications
LO4 Demonstrates self-awareness skills, commitment to learning throughout life and experience for teaching at the level of higher and postgraduate education.	Self-assessment of one's own knowledge, skills, and professional development	Report
LO5 Participates in nuncupative or in writing professional discussions, publishes research results in international academic publications.	Testing Oral interview	Essay (short and long) The short answer is
LO6 Demonstrates a systematic understanding of public health service in the field of its qualifications, have a grip on research methods used in this direction.	Internship	Experience reports
LO7 Demonstrates leadership qualities, innovativeness and independency in work and study activities in new contexts that require the solution of problems linked by many interrelated factors.	Oral interview	Portfolio
LO8 Capable to communicate on topics in his field of competence with equal status person, with the broad scientific community and society in general.	Cases	Essay (short and long)

Work plan for the entire period of study

The cycle of disciplines		Discipline code	Name of the discipline	Amount of credits	General hours	Practical lesson	IWD		1 year of study	2 year of study	3 year of study	Form of control
1	2	3	4	5	6	7	IWDT	IWD	10	11	12	13
BD	UC/OC	BASIC DISCIPLINES		18	540	180	108	252	14	4		
BD	UC	1-Модуль:(Modern educational technologies and statistical methods of analysis)										
		University component		4	120	40	24	56		4		
		D-Bios	Biostatistics (advanced course)		4	120	40	24	56		4	Exam
	TP	Teaching practice		10	300	100	60	140	10			Report
	OC	Optional Component		4	120	40	24	56	4			
		D-ETUnv	Educational technologies in universities		4	120	40	24	56	4		Exam
		D-EKGABPH	Epidemiological and clinical-genetic analysis of Parkinson`s disease, Huntington's chorea, ataxia and dystonia		4	120	40	24	56	4		Exam
D-PCHI		Problems of childhood infections		4	120	40	24	56	4		Exam	
PD	UC/OC	PROFILE DISCIPLINES		27	810	270	162	378	18	9		
PD	UC	2- Module: (Methods of scientific research oral and written)										
		University component		8	240	80	48	112	4	4		
		D-MRPSR	Modern methods and principles of scientific research		4	120	40	24	56	4		Exam
		D-ESA	Ethics in scientific activity		4	120	40	24	56		4	Exam
	OC	Optional Component		4	120	40	24	56	4			
		D-SC OW	Scientific communication: oral and written		4	120	40	24	56	4		Exam

	D-SBZ	Surgery of biliopancreatoduodenal zone	4	120	40	24	56	4			Exam
	D-ZI	Zonotic infections	4	120	40	24	56	4			Exam
	D-ABSCMS	Atrophy of the brain and spinal cord in multiple sclerosis	4	120	40	24	56	4			Exam
	D-PSND	Post-stroke neuropsychiatric disorders	4	120	40	24	56	4			Exam
	3-Module: (Management of scientific research and scientific projects and ethical principles of scientific research)										
	Optional Component		5	150	50	30	70		5		
	D-PM	Project management	5	150	50	30	70		5		Exam
	D-ECPID	Emergency conditions in the practice of infectious diseases	5	150	50	30	70		5		Exam
	D-ISYA	Ischemic stroke at a young age	5	150	50	30	70		5		Exam
	D-CEAFP	Clinical and electrophysiological aspects of facial pain	5	150	50	30	70		5		Exam
	D-NDESPD	Neuropsychological Disorders in the Early Stage of Parkinson's Disease	5	150	50	30	70		5		Exam
	RP	Research practice	10	300	100	60	140	10			Report
RW	RESEARCH WORK		123	3690	1230	2460	28	47	48		
RWDS	Research work of a doctoral student, including an internship and a doctoral dissertation		12	360	120	240	12				Report
			16	480	160	320	16				
			17	510	170	340		17			
			30	900	300	600		30			
			30	900	300	600			30		
			18	540	180	360			18		
FE	FINAL EXAMINATION		12	360	120	240			12		
WDDD	Writing and defending a doctoral dissertation		12	360	120	240			12		
TOTAL			180	5400	1800	3600	60	60	60		