

"APPROVED"  
Rector  
JSC "SKMA"  
d.m. s., professor M.M. Rysbekov  
" 02 " 2022 y.

### EDUCATIONAL PROGRAM

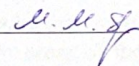
EP code: 7M10144  
Name of the educational program: Medicine  
Level of the educational program: Master's degree

Shymkent, 2022y.

**The educational program was developed by:**

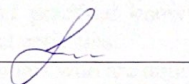
"Biology and Biochemistry"

Head of Department, Master of Science, professor


Esirkepov M.M. 

**Agreed with the employer::**

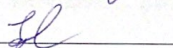
Head of the Health Department of the city of Shymkent

Pazilov B.D. 


Deputy Head of the Department for Quality Control and Safety of Goods and Services of the Turkestan Region, Ph.D.

Akhmetov A.R. 

Deputy Chief Physician of the Medical Center "Mental Health Center" of the Shymkent Health Department, Ph.D.


Erezhepov E.V. 

Director of the BUU "Association of Private Clinics SKR".

Timoshenko M.G. 

**"Medicine" BBC Chairman**

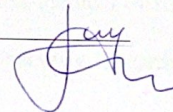
Protocol № 14 05 08 2022y.

Dosybaeva G.N. 

**Approved by the Academic Council**


Vice-Rector of the SCW

Protocol № 5a 08 08 2022y.

Nurmashev B.K. 

**Approved by the Academic Council**

Protocol № 15 08 08 2022y.

ONTUSTIK QAZAQSTAN <b>MEDISINA</b> <b>AKADEMIASY</b> «Оңтүстік Қазақстан медицина академиясы» АҚ	 <b>SKMA</b> -1979-	SOUTH KAZAKHSTAN <b>MEDICAL</b> <b>ACADEMY</b> АО «Южно-Казахстанская медицинская академия»
Department of "Biology and Biochemistry". Educational program		


### 7M10144 - Passport of the educational program "Medicine".

**Mission of the educational program:** Training of masters who have mastered the skills of conducting modern clinical research, are able to conduct in-depth expert, analytical research and make effective decisions in priority areas of the healthcare system.

**The purpose of the educational program:** Training of masters with deep theoretical and practical knowledge in a particular area of medicine, possessing the skills of conducting expert, analytical, research and project activities.

1. **EP base:** demand in the labor market: the educational program is aimed at healthcare professionals who are able to conduct scientific research and introduce organizational and managerial technologies to solve complex problems of protecting public health and developing an effective healthcare system in Kazakhstan.
  2. **Regulatory documents for the creation of an educational program (state educational standards, professional standards, etc.)**
    - On amendments to the order of the Acting Minister of Health and Social Development of the Republic of Kazakhstan dated July 31, 2015 No. 647 "On approval of state uniform mandatory standards and standard vocational training programs for medical and pharmaceutical specialties" (No. DSM-12/2020 RK 21.02.2020 );
    - "Rules for organizing the educational process on credit technology» Order of the Minister of Education and Science of the Republic of Kazakhstan dated April 20, 2011 N152 (12.10.2018, with amendments and additions, No. 563)
    - Law of the Republic of Kazakhstan "On Education" dated July 27, 2007 No. 319-III (as amended and supplemented on July 4, 2018);
    - State standard for compulsory education at all levels of education (October 31, 2018 No. 604);
  3. **Sphere of professional activity:** healthcare organizers; heads of state and non-state medical and non-medical institutions; Research activities at universities;
  4. **Professional Services Object:** healthcare management organizations, healthcare and social security organizations, organizations of higher and postgraduate education; organization of science.
- types of professional services:**
- organizational and managerial; to
  - research activities;

№	Description of EP	Data
1	Code and classification of the field of education	7M10 Health
2	Code and classification of areas of study	7M101 Health
3	Group of educational programs	M101
4	Name of the educational program	7M10101 - "Medicine"
5	type EP	New EP
6	BJHS level	7
7	Level according to NBS	7
8	SBS level	7.1
9	EP features	a) no
	Partner University (EP)	-
	Partner higher education institution	-
10	List of competencies	Key competencies of the program graduate (list and code). <b>CC 1</b> Methods in the field of public health. <b>CC 2</b> Public health and its physical, radiological, chemical and biological-ecological determinants <b>CC 3</b> Health promotion: health education, health protection and disease prevention <b>CC 4</b> Ethics.
11	Learning Outcomes	Presentation of the educational results of the program graduate (listing and coding). <b>TR 1</b> - Demonstrates knowledge and understanding of the interdisciplinary nature of medical research. <b>TR 2</b> is able to acquire new knowledge and applied skills in research, professional and teaching activities in the field of medicine. <b>TR 3</b> - Within the limits of his qualifications, he can solve problems


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		in the field of medicine on the basis of scientific methods. TR4 - Uses scientific information to advance the medical field and introduce new methods within their qualifications TR 5 - Communicates information, ideas, conclusions, problems, and solutions clearly and comprehensibly to qualified medical professionals as well as non-medical professionals. TR 6 -Based on modern achievements of science and practice, he plans a qualified professional activity in the field of medicine. TR 7 - Engaged in professional growth, demonstrates self-development skills
12	Study type	Daytime
13	Language of instruction	Kazakh, Russian
14	Amount of loans	120
15	Period of study	2 years
16	Degree awarded	Master of Medical Sciences
17	Availability of an application to the license for personnel training	-
18	EP accreditation	No
	Name of the accreditation body	-
	Accreditation period	-
19	Item Details	Information about the subjects of the FBP, BP, KP HOK / TK (Appendix 1.2)

*Annex 1*

**7M10144 - "Medicine" MATRIX for comparing learning outcomes with developing competencies in the educational program**

	TR 1	TR 2	TR 3	TR 4	TR 5	TR 6	TR 7
CC1							


ОҢТҮСТІК ҚАЗАҚСТАН МЕДИСІНА АКАДЕМИЯСЫ «Оңтүстік Қазақстан медицина академиясы» АҚ	 SKMA -1979-	SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия»
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CC2							
CC3							
CC4							

CC1	Health Methods
CC2	Public health and its physical, radiological, chemical and biological-ecological determinants
CC3	Health promotion: health education, health protection and disease prevention
CC4	Ethics

**7M10144 - "Medicine" learning outcomes for the educational program**

Result code	Results Statement
TR 1	Demonstrates knowledge and understanding of the interdisciplinary nature of medical research.
TR 2	Able to acquire new knowledge and skills of an applied nature in research, professional and teaching activities in the field of medicine.
TR 3	As part of his qualifications, he can solve problems in the field of medicine based on scientific methods.
TR 4	As part of his qualification, he uses scientific information to develop the field of medicine and introduce new methods.
TR 5	Communicates information, ideas, conclusions, problems, and solutions clearly and understandably to medical and non-medical professionals.
TR 6	Based on modern achievements of science and practice, he plans a qualified professional activity in the field of medicine.
TR 7	Engaged in professional growth, demonstrates self-development skills

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Appendix 1.2

### Competency Achievement Matrix / Learning Outcomes

№	Item name	Summary (30-50word)	Amount of credits	TR(code) formation						
				TR1	TR2	TR3	TR4	TR5	TR6	TR7
<b>Cycle of basic disciplines</b>										
<b>University component</b>										
1	History and philosophy of science	Philosophy and scientific methodology as a branch of philosophical knowledge. The structure of scientific knowledge. scientific rationality. Features of the modern period of development of science. Science as a social institution. Natural science in the structure of modern scientific knowledge. History of society, culture, history and formation of the science of man. Actual philosophical problems of real sciences.	3	+	+					
2	Foreign language (professional)	Development and improvement of the skills of practical mastery of a professional language, active use of a foreign language in everyday and professional communication: acquisition of vocabulary, grammar, oral speech, writing, listening, translation skills.	3	+						+
3	Pedagogy of higher education	Pedagogy of the higher school. The main directions and trends in the development of higher education in the modern world. New paradigm of education. Higher education in the Republic of Kazakhstan. Meaning and structure of pedagogical activity. Theory of teaching in higher education (didactics). Modern educational technologies. Organization of the educational process based on the credit system of education. Education quality management system.	3							+
4	Psychology of management	Significance of management processes Object of management psychology. Psychology of activity of	3			+		+		

		the head of the organization and his personal psychology. Functional-structural analysis of management activities. Psychological problems that arise between the head of the organization and its employees. A clear understanding of the level of responsibility of the leader.								
5	Pedagogical experience	Formation of practical teaching skills and teaching methods	8							
	<b>Eventually</b>		<b>20</b>							
<b>Cycle of basic disciplines</b>										
<b>Select component</b>										
6	Research in clinical medicine	Advanced clinical methods and technologies for examining patients with major diseases of the internal organs. Modern non-invasive and interventional methods for diagnosing diseases of internal organs, based on the principles of evidence-based medicine, and their importance in research activities. Providing medical care in life-threatening situations.	5			+		+		
7	Individual pharmacotherapy	Oncological statistics of the Republic of Kazakhstan and the world. Introduction to individualized pharmacotherapy. Individual factors influencing the pharmacological response. The human genome. Research in the field of pharmacogenetics and pharmacogenomics. OMICS technologies. Pharmacogenetic aspects of therapy of diseases of various organs and systems. Theranostics. Pharmacogenetic test systems. Database of pharmacogenetic studies. Digital technologies in personalized pharmacotherapy.				+		+		
8	Topical issues of	Application of scientific information, scientific						+	+	



	outpatient surgery	method and statistical research in clinical problems, diagnostics and differential diagnostics and treatment of: purulent-inflammatory diseases of the skin and subcutaneous tissue, diseases of the ligaments and joints, diseases of the mammary gland, diseases of the rectum, diseases of the genitourinary system, injuries of the feet and skin , thermal injury.								
9	Modern approach to surgical infection	Use of scientific information, scientific approach and statistical research in the following issues: organization of surgical care, wounds and wound infections, infections of the skin and subcutaneous tissue, purulent hand surgery, purulent diseases of the lungs and mediastinum; peritonitis and sepsis.				+				+
10	Physician communication skills	Communicative competence and communication efficiency. Barriers and effective ways to build relationships. Conflicts, ways to resolve them. Ethical issues, resuscitation and death. I'm giving you sad news. Professional adaptation, image and communicative endurance. Iatrogenic, medical errors. Leadership qualities and their importance in research activities. Psychological types of effective leaders.	5					+		+
11	Methods for the effective use of drugs	Proper use of medicines. Principles of effective pharmacotherapy (reduction, control, individualization, economy, etc.). Indicators of the effective use of drugs. Tasks of the effective use of medicines. Priority groups of medicines in medical organizations. WHO policy on the effective use of medicines.							+	
12	Diagnosis of abdominal surgery and modern methods of	Modern methods of diagnostics and differential diagnostics: the use of scientific information, scientific approach and statistical research in the problems of surgical diseases of the stomach, large					+		+	

	differential diagnosis	and small intestine, hepatobiliary region, hernias of the abdominal wall, injuries of the abdominal organs.							
13	Actual problems of geranthology and geriatrics	Features of aging of organs and systems, mental changes. Principles of organization of periodic assistance of the Republic of Kazakhstan. Achievements of scientific research in the field of geriatrics and modern methods of providing medical care and diagnosis in diseases of internal organs. Fundamentals of geriatric pharmacotherapy. Geriatric rehabilitation. Moral-ethical and legal culture in geriatrics. Professional values and willingness to work in a multidisciplinary environment.	5		+			+	
14	Drug interactions and interchangeability	Pharmaceutical, pharmacokinetic and pharmacodynamic drug interactions. DZ with food, alcohol, etc. b. interaction. drug combination. Adverse drug interactions are countermeasures. Computer programs of intersectoral interaction. Adverse reaction rating scale. Primary and generic DZ. Pharmaceutical, pharmacokinetic and therapeutic equivalence. Methods for the study of bioequivalence. Legal and economic aspects of the revised designation of J.				+		+	
	<b>Eventually</b>		<b>15</b>						
<b>Cycle of profiling disciplines</b>									
<b>University component</b>									
15	Methodology of scientific research in medicine	Fundamentals of national law in the field of scientific research. Fundamentals of international law in the field of scientific research. Descriptive and analytical studies. Systematic review. Meta-analysis. Collection of information. Data processing. General requirements and rules for the design of research papers. Reviewing of research papers, report on the work, preparation of abstracts of the report. Preparation for publication of scientific materials.	3				+		+
16	Fundamentals of	Tasks of medical education. Teaching methods.	3		+				+

	teaching methods in medicine	Development of a personal educational trajectory. Methods for assessing knowledge, skills, attitudes, competence and practice. Features of teaching clinical disciplines. Principles of organization of postgraduate and continuous professional development of doctors. Features of adult education. Self-learning.								
17	Organization and management of healthcare	Supervision and maintenance of health authorities. Separation of health care functions at different levels of management. Problems of reforming the health care system. Control theory. Control system. Management is aimed at performing certain tasks. Quality management system in health care. Strategic management of the healthcare system. The hospital as an organization. Model of the organization of a medical institution. New organizational models.	3				+	+		
18	Clinical epidemiology and evidence-based medicine	Processing and analysis of data from epidemiological studies. Epidemiological aspects of screening. Causal relationships in epidemiology. epidemiological survey. Terminology, tools and methods of evidence-based medicine. Basic statistical knowledge needed to interpret data in evidence-based medicine. Quantitative and qualitative research methods in evidence-based medicine. Randomized controlled trials. "Gold standard". levels of evidence.	3		+	+				
	<b>Eventually</b>		<b>12</b>							
<b>Cycle of profiling disciplines</b>										
19	Research practice Research practice	Acquaintance with modern theoretical, methodological and technological achievements of domestic and foreign science, modern methods of scientific research, processing and interpretation of experimental data and their application.	12							
<b>Cycle of profiling disciplines</b>										
<b>Select component</b>										

20	Problems of treatment in thoracic surgery	The use of scientific information, scientific methods and statistical research in the clinic, diagnosis, differential diagnosis and methods of treatment of injuries of the chest wall and chest organs, diseases of the bronchi and lungs, diseases of the chest cavity, pericardium and heart.	5					+		+	
21	Actual problems of gastroenterology and hepatology	Organized gastroenterological and hepatological services of the Republic of Kazakhstan. Modern advances in the diagnosis and treatment of gastroenterological diseases of the liver: GERA, gastric and duodenal ulcers, enteritis and colitis, hepatitis, cirrhosis of the liver, cholecystitis and cholangitis, liver failure. Modern methods of treatment of diseases of the digestive system and liver.			+	+					
22	Good Clinical Practice (GCP)	Concepts and principles of appropriate clinical practice. Legal aspects of clinical research. ethics committee. Stages of clinical drug trials. Study design selection, data processing and documentation. Monitoring and audit. Procedure for registration of new medicines.			+		+				

23	Topical issues of acute surgical diseases of the abdominal cavity.	Acute appendicitis, acute gastrointestinal bleeding, testicular ulcer of the stomach and duodenum, acute cholecystitis, acute pancreatitis, acute intestinal obstruction, compressed fissures, obstructive jaundice, mesenteric circulation disorders, the use of scientific information, scientific method and statistical research in the clinic, diagnosis, differential diagnosis and treatment of abdominal injuries.	5				+		+	
24	Actual problems of endocrinology and hematology	Theoretical foundations of endocrinology and hematology. Organization of the endocrinological and hematological service of the Republic of Kazakhstan. Diabetology, thyroid disease, malnutrition, obesity and metabolic disorders; actual problems of endocrinology in the departments of hematology-anemia, hemoblastoses, coagulopathy, hemophilia. Modern methods of diagnostics and treatment of diseases of the endocrine system and blood diseases based on the principles of evidence-based medicine.			+	+				

25	Monitoring and accounting for the use of medicines in medical organizations	Monitoring and recording drug use. Principles of medical documentation. Drug supply in medical organizations (inpatient, inpatient, inpatient, emergency, rehabilitation medical care). Medicinal preparations are purchased within the framework of the TICRC on a free and preferential basis. Inventory of medicines stored in medical organizations. Prescription and registration of medicines.		+			+			
26	Actual problems of nephrology	Organization of the Nephrological Service of the Republic of Kazakhstan. Modern advances in the diagnosis and treatment of diseases of the kidneys and urinary tract: glomerular and tubulointerstitial kidney disease, renal failure. Modern methods of diagnosis and treatment of diseases of the urinary system, based on the principles of evidence-based medicine.			+	+				
27	Modern diagnostics and treatment of abdominal sepsis.	Scientific information, scientific, methodological and statistical studies in the clinic, diagnostics, differential diagnosis and methods of treatment of sepsis, abdominal sepsis, minimally invasive technologies in the treatment of abdominal sepsis, systemic inflammatory response syndrome, multiple organ failure syndrome, septic shock, anaerobic infection, peritonitis, septicemia, lung abscess is used.	5				+		+	







	student, including master's practice Undergraduate research work, including internship and master's thesis	analysis of data. Methods of scientific research in medicine. Evaluation of the results of the study								
<b>Final certification (FA)</b>										
36	Preparation and defense of a master's thesis Preparation and defense of a master's thesis	Assessment of key competencies and learning outcomes achieved upon completion of the master's program.	12							
	<b>GENERAL</b>		<b>120</b>							