

ОҢТҮСТІК-ҚАЗАҚСТАН MEDISINA АКАДЕМИАСЫ «Оңтүстік Қазақстан медицина академиясы» АҚ		SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казakhstanская медицинская академия»	
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EDUCATIONAL PROGRAM

Educational program group: BM 089 «Medical and preventive care»

Educational program cipher: 6B10118

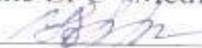
Name of the educational program: «Medical and preventive care»

The level of the educational program: Bachelor and profile magistracy

Shymkent, 2025

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The educational program was developed by the members of the EPC «Medical and preventive care»

Chairman of the EPC «Medical and preventive cares»  **Eskerova S.**

Protocol № 9 from «11» 04 2025 year

Agreed with employers:

Deputy head of the Department of Sanitary and Epidemiological Control
 Shymkent city of the Sanitary and Epidemiological Control
 Committee of the Ministry of Health of the Republic of Kazakhstan



Akhmetov A.

Director of the branch of the Republican State Enterprise on the
 right of economic management «National Center of Expertise»
 in the Turkestan region of the Committee of Sanitary and
 Epidemiological Control of the Ministry of Health of the Republic of Kazakhstan



Abdrazakov A.

Acting Director of the branch of RSE on the REM "National Center of Expertise"
 CSEC of the Ministry of Health of the Republic of Kazakhstan
 "Disinfection Center" in the Turkestan region


Saparova S.

Approved by the Methodological Council JSC «SKMA»

Vice-rector for educational and methodological work

Protocol № 9 from «02» 05 2025 year


Anartaeva M.

Approved by the Academic Council JSC «SKMA»

Protocol № 13 from «02» 05 2025 year

Update of the EP was discussed at the Academic Council

Protocol № 13 from «02» 05 2025 year.



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Passport of the educational program

1. The mission of the educational program is to train competitive personnel in accordance with modern requirements of education, science and healthcare systems.

2. The purpose of the educational program is to train qualified specialists with professional, research, managerial and communication skills to carryout independent activities in the field of ensuring the sanitary and epidemiological well-being of the population.

3. Justification of the educational program:

-for students: obtaining continuous integrated medical education, including basic training -bachelor's and master's degrees. At the end of 5years of study, the graduate will be awarded a master's degree and a diploma with the qualification of a hygienist, epidemiologist

The need in the labor market: provision of personnel with qualities such as high skill and professional perseverance, availability of the necessary practical and theoretical knowledge, competence, observation and insight, developed clinical thinking and passion.

4. The professional standard on the basis of which the educational program was developed:

Regulatory documents for the development of an educational program.

- Code of the Republic of Kazakhstan dated 07.07.2020 № 360- VI "On People's Health and Health Care System" (with amendments and additions as of 04.07.2022);
- Law of the Republic of Kazakhstan "On Education" dated 27.07.2007 № 319- III with amendments as of 04.07.2022
- Order of the Minister of Health of the Republic of Kazakhstan "On approval of the state mandatory standards for levels of education in the field of health care" of 04.07.2022, № KRDSM-63 with amendments and additions of 26.06.2025, № 61)
- Order of the Minister of Science and Higher Education of the Republic of Kazakhstan "On approval of the state mandatory standards of higher and postgraduate education" of 20.07.2022, № 2 with amendments and additions of 04.03.2025, № 90
- Order of the Minister of Health of the Republic of Kazakhstan "On approval of professional standards in the field of healthcare" dated 24.01.2024 No. 46;
- Order of the Minister of Healthcare of the Republic of Kazakhstan "On approval of model curricula on medical and pharmaceutical specialties" of 09.01.2023, № 4;
- On amendments and additions to the Order of the Minister of Health of the Republic of Kazakhstan dated December 21, 2020 No. KR DSM-305/2020 "On approval of the nomenclature of specialties and specializations in the field of healthcare, nomenclature and qualification characteristics of positions of healthcare workers"
- Order of the Minister of Education and Science of the Republic of Kazakhstan dated April 20, 2011 № 152 "On approval of rules of

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educational process organization by credit technology of education" (as amended on May 06, 2021)

- Order of the Minister of Education and Science of the Republic of Kazakhstan from 30.10.2018 № 595 with amendments and additions as of 29.12.2021. "On approval of the Standard Rules of activity of educational organizations of respective types and kinds",
- "Regulations on the Order and Procedures for the Development of Educational Programs" "SKMA" JSC from **22.04.2024y.**
- Internal regulatory documents of SKMA JSC.

Field of professional activity: the field of professional activity of graduates who have mastered the educational program 6B10118 «Medical and preventive care» includes the protection of public health by ensuring the sanitary and epidemiological well-being of the population. Healthcare, education and science.

5. Objects of professional activity:

- environment,
- medical organizations;
- preschool institutions, educational organizations;
- industrial enterprises;
- agricultural facilities;
- public service facilities, etc.
- organizations for the implementation of professional activities:
 - institutions of sanitary and epidemiological control;
 - management of departments of sanitary and epidemiological control of the Ministry of Health;
 - department of SEC of the SECC ;
 - department of sanitary and epidemiological control;
 - centers of expertise of the SECC;
 - anti-plague stations;
 - disinfection centers;
 - sanitary quarantine and sanitary control points;
 - health care organizations;
 - educational organizations;
 - organization of science;
 - population;

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- as set of tools and technologies aimed at ensuring the sanitary and epidemiological well-being of the population.

Types of professional activity:

- sanitary and hygienic;
- antiepidemic;
- control and regulatory;
- organizational and managerial;
- information and analytical;
- sanitary and educational;
- scientific research;
- pedagogical.

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General information

№	Characteristics of the EP	Findings
1.	Registration number	6B10100109
2.	Code and classification of the field of education	6B10 Healthcare
3.	Code and classification of training areas	6B101 Healthcare
4.	Group of educational programs	BM089 Medical and preventive care
5.	Name of the educational program	6B10118 «Medical and preventive care»
6.	Types of EP	New EP
7.	ISCED level	
8.	NQF level	7
9.	SQF level	7
10.	Distinctive features of the EP	Continuousinte grated educational program
	University partner (JEP)	-
	University partner (DDEP)	-
11.	List of competencies	<p>A. Identify problems that threaten the sanitary and epidemiological well-being of the population:</p> <ol style="list-style-type: none"> 1. Use critical thinking to identify a public health problem/threat; 2. To assess the scale of the problem and determine further necessary actions, their algorithm based on evidence-based data and the specifics of the current situation; 3. Collaborate with colleagues inside and outside the organization to assess or identify a problem. <p>B. Conduct surveillance activities:</p> <ol style="list-style-type: none"> 1. Develop surveillance measures for specific cases, risks and threats to public health; 2. Determine the need for the necessary data for surveillance; 3. Be able to draw conclusions based on the data obtained and the work done; <p>Evaluate the effectiveness of surveillance (or individual surveillance activities);</p> <p>C. Examine acute and chronic conditions or other adverse outcomes in the population:</p>
	CC1. Assessment and analysis	

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		<p>1. Conduct a population health assessment;</p> <p>2. Prioritize solutions to existing threats;</p> <p>3. Select and apply adequate methods of studying and investigating the state of public health;</p> <p>4. Generate hypotheses;</p> <p>5. Assist in the design of the investigation (e.g., disease investigation, research or screening program).</p> <p>D. Apply the principles of good ethical practice relating to the research, collection, dissemination and use of data:</p> <p>1. Adhere to ethical standards and principles in planning, conducting, collecting, disseminating and using data;</p> <p>2. Apply relevant legislation in the collection and management of data;</p> <p>3. Apply ethical standards in public health research;</p> <p>4. Interact with the local, national Bioethics Commission;</p> <p>5. Understand and be able to resolve conflicts of interest;</p> <p>6. Apply regulatory legal acts concerning the inviolability of private life, its confidentiality, the right to health, and the responsibility of the parties.</p> <p>E. Managing data obtained from surveillance, investigations, or other sources:</p> <p>1. Develop database requirements;</p> <p>2. Work with databases.</p> <p>F. Analysis of epidemiological investigation data:</p> <p>1. Create a data analysis plan;</p> <p>2. Analyze the data.</p> <p>G. Summarize the results of the analysis and draw conclusions:</p> <p>1. Apply knowledge of epidemiological principles and methods to make recommendations;</p> <p>2. Determine the need for a special analysis, including a survival analysis, an analysis of economic efficiency/economic benefit/economic utility;</p> <p>3. Draw conclusions about the work done, including being able to highlight key points.</p> <p>H. Recommend specific evidence-based interventions and control measures based on</p>
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		epidemiologic data and setting: 1. Take into account the cultural/social/political context for the recommendations or interventions being developed; 2.Utilize scientific evidence when recommending actions or interventions.
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	CC2. The scientific and practical basis of public health	A. To use modern knowledge about the causes of diseases for the practice and management of the epidemic process: 1. Relate the major etiologic processes of human disease to subject areas of interest (e.g., infectious diseases, chronic diseases); 2.Apply knowledge of human and environmental biology and behavioral sciences and principles to identify potential disease mechanisms; 3.Apply principles of the host/agent/environment model to disease causation, prevention, and control; 4.Describe the role and influence of social and behavioral determinants (including societal, political, social, familial, and individual) of health and health maintenance; preservation; 5. Incorporate etiologic principles into disease prevention and control strategies. B.Utilize laboratory methods and resources for epidemiologic interventions: 1. Interpret laboratory data, taking into account factors affecting the results of screening and diagnostic tests; 2. Identify the roles and capabilities of laboratories as they relate to public health and epidemiologic well-being as they are used in epidemiologic research; 3.Plan and coordinate laboratory and epidemiologic activities including sampling, communication; 4. Make necessary arrangements for sample collection, storage and transportation. C.Evaluate indicators of the sanitary and epidemiologic well-being of environmental and occupational facilities and professional activities: 1. Assess the hygiene and epidemiological condition of the environment, workplaces, air, soil,
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		<p>water and foodstuffs;</p> <p>2. Assess the physical development of children and adolescents, develop and implement health-improving measures;</p> <p>3. To carry out dosimetric control and the main set of measures to organize radiation safety of the population.</p> <p>D. Apply information technologies, including collection, processing and analysis of data for epidemiological practice:</p> <p>1. Use software tools that support searching, data collection, input, abstraction, management, analysis, planning, visualization and reporting;</p> <p>2. Apply procedures and technical tools(security) to ensure the integrity and protection of confidential information in electronic systems;</p> <p>3. Compile data from a variety of sources in creating new information for public health decision making;</p> <p>4. Understand the principles of modeling epidemic and other processes using modern technology.</p>
	CC3. Communication	<p>A. Be able to convey, communicate, and present relevant information to target audiences:</p> <p>1. Identify target audiences, methods, and content to communicate work done or planned;</p> <p>2. Communicate activities to pre-professional audiences through written and oral communication tools;</p> <p>3. Communicate epidemiologic information to the general public, media, and/or policy makers through written and oral communication tools;</p> <p>4. Adapt the content of disseminated information, its scope, frequency of dissemination depending on the situation;</p> <p>5. Participate in the development of risk messages that pose a threat to public health;</p> <p>6. Respond to public inquiries about epidemiologic data or the situation;</p> <p>7. Be able to explain or teach basic principles of public health to non-epidemiologists or lower level colleagues;</p> <p>8. Identify risks in communication with colleagues and the public.</p> <p>B. Utilize interpersonal skills in communicating with colleagues and the public:</p>

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	<p>1. Demonstrate the ability to listen effectively, especially when presenting public health data;</p> <p>2. Demonstrate professional interpersonal, interdisciplinary, trans-disciplinary, and multi-disciplinary communication.</p> <p>C. Utilize effective communication techniques:</p> <p>1. Participate in the selection of communication channels and determine their interface;</p> <p>2. Implement policies that take into account security, privacy, and legal considerations when transmitting information via e-mail, alert networks, databases, etc.;</p> <p>3. Use effective educational, behavioral methods and tools to promote public health (e.g., through community education, behavior modification, collaborative policy development, promotion of ideas and community mobilization).</p>
CC4. Social and social significance and interaction for practice	<p>A. Provide input to epidemiological studies, public health programs and public health planning processes at the national, regional and population levels:</p> <p>1. Utilize population-based information in the design, interpretation, and conduct of epidemiologic studies;</p> <p>2. Contribute to the evaluation of the local public health system from a sanitary-epidemiologic welfare perspective to assist in public health planning at the national, regional, and population levels.</p> <p>B. Participate in the development of community partnerships to support epidemiologic investigations:</p> <p>1. Identify partners and stakeholders needed for epidemiologic investigation;</p> <p>2. Utilize participatory, engagement strategies to achieve community outcomes when planning, conducting, and evaluating epidemiologic investigations;</p> <p>3. Explain the roles of partners and stakeholders in an epidemiologic investigation;</p> <p>4. Participate in the design of epidemiologic studies, taking into account the views of the target groups.</p>
CC5. Professional activity management (current, strategic planning and management)	<p>A. Manage events in professional activities:</p> <p>1. Set goals and objectives;</p> <p>2. Clearly communicate requirements to performers;</p>

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		<ol style="list-style-type: none"> 3. Establish a schedule for accomplishing tasks; 4. Form a team, analyze the need for human and other resources to achieve goals; 5. Evaluate the performance of team members as they perform their duties; 6. Keep accurate records. <p>B. Understand and incorporate financial considerations when planning activities and workloads:</p> <ol style="list-style-type: none"> 1. Know the financial rules of the organization and budgeting; 2. Evaluate the resources needed to accomplish the objectives of the operational plan, including personnel, equipment, supplies, and travel expenses; 3. Track and estimate costs that may arise from unexpected epidemiologic activities such as operational investigations and emergency response; 4. Adjust activities as necessary to stay within the defined budget; 5. Train team members as needed in the performance of their duties.
	CC6. Leadership and systems thinking	<p>A. Support and promote the importance of public health sanitary and epidemiologic well-being in health care:</p> <ol style="list-style-type: none"> 1. Promote the organization's vision in all programs and activities; 2. Assist in strategic planning; 3. Propose and implement changes; 4. Use performance measures to evaluate and improve the quality of epidemiology services; 5. Demonstrate ethical behavior in daily life and professional activities. <p>B. Promote workforce development:</p> <ol style="list-style-type: none"> 1. Organize a team with the skills necessary to perform epidemiologic activities at the appropriate level; 2. Encourage continuing education; 3. Motivate the team for quality performance and professional development. <p>C. Prepare for emergency response:</p> <ol style="list-style-type: none"> 1. Incorporate an epidemiologic perspective when developing an emergency response plan; 2. Participate in emergency response planning for the epidemiology unit; 3. Respond to emergencies in the area of public health.

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	CC7.Influence on health policy	<p>A. Bring an epidemiologic perspective to the development and analysis of sanitary and epidemiologic welfare policies:</p> <ol style="list-style-type: none"> 1.Demonstrate an understanding of public health policy; 2.Participate in the development of policies related to sanitary and epidemiologic well-being; 3.Influence the transformation of public health policy through professional practice and research; 4.Adhere to the rule of law applicable to public officials and funding sources, including the issue of lobbying by certain interests.
12	Learning outcomes	<p>LO1 Analyzes critically and applies in practice a worldview position, as well as scientifically based information and knowledge in the field of socio-behavioral, biomedical, hygienic, epidemiological and clinical sciences.</p> <p>LO2 Builds effective professional cooperation with authorities, organizations, the public and community members, observing the principles of inclusion, and the media in matters of ensuring the sanitary and epidemiological well-being of the population.</p> <p>LO3 He is proficient in information technology, effectively uses digital tools and artificial intelligence in the field of ensuring the sanitary and epidemiological well-being of the population to introduce new approaches with in his qualifications, and uses electronic systems to document processes.</p> <p>LO4 Possesses the skills of organizing the work of the labor collective, human resource management, setting goals and formulating tasks, determining priorities of activity and supports continuous personal and professional growth.</p> <p>LO5 Applies in practice the normative legal acts of the Republic of Kazakhstan on the protection of the health of citizens; sanitary and environmental legislation, the legal basis for the activities of sanitary and epidemiological control specialists.</p> <p>LO6 He has the skills of laboratory and instrumental research, analysis and evaluation of quality indicators of various environmental objects and formulation of his own conclusions in the form of recommendations to prevent adverse effects on them.</p> <p>LO7 Organizes sanitary and epidemiological control of the environment, drinking water, food, supervision of vital objects, protection of borders from the import and spread of particularly</p>

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	<p>dangerous infections in order to develop measures to ensure the sanitary and epidemiological well-being of the population, including in emergency situations.</p> <p>LO8 Collects information and medical and statistical analysis on the state of the sanitary and epidemiological situation, with an assessment of health indicators of various age and gender groups of the population, using data from official accounting and reporting documents, as well as on the basis of preliminary and periodic medical examinations</p> <p>LO9 Conducts an examination of the epidemic outbreak, evaluates the epidemiological situation to determine the cause of its occurrence, observing the principles of ensuring biosafety, and draws up a plan for anti-epidemic measures in epidemic outbreaks of various types.</p> <p>LO10 He is able to carry out epidemiological surveillance: collection, registration and formation of a database of infectious (parasitic) morbidity and control over the implementation of preventive and anti-epidemic measures for them, as well as evaluation of the effectiveness of immunoprophylaxis for children and adults.</p> <p>LO11 Conducts sanitary and hygienic audit, sanitary and epidemiological expertise, investigation, examination, research, testing, toxicological, hygienic types of assessments of objects of economic and other activities, products, works and services, and also evaluates compliance with technical regulations of food and consumer goods in order to establish and prevent harmful effects of environmental factors on health causes of the occurrence and spread of infectious diseases and mass non-communicable diseases and (or) poisoning, occupational diseases.</p> <p>LO12 Has the skills to develop, organize and carry out sanitary-anti-epidemic and sanitary-preventive measures to promote and protect public health, prevent infectious, parasitic and non-communicable diseases, assess their effectiveness.</p> <p>LO13 Conducts sanitary and educational work among the population, through the media on the prevention of diseases and the formation of a healthy lifestyle, improving self-development skills and observing social and ethical norms.</p> <p>LO14 Conducts scientific research based on the collection of primary material, interprets indicators from the database and research results, and also makes scientifically sound decisions based on the principles of evidence-based medicine and bioethics.</p>
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13.	Form of education	Full-time study
14.	Volume of credits	Kazakh, Russian and English
15.	Language learning	5 years
16.	The duration of the training	300
17.	Academic degree awarded, qualification	Master of Public Health, doctor-hygienist, epidemiologist
18.	Availability of application to the License for the direction of training	KZ36LAA00011387
19.	The presence of accreditation EP	yes
20	Name of accreditation organization	“IndependentAgencyforAccreditationandRating”IAAR, 10.06.2022
	Certificate of accreditation №, Validity period of accreditation	Magistracy-№AB4365, 10.06.2022г.- 09.06.2027г.
	Information about disciplines	Application1.2

Application1.1

Matrixofcorrelationoflearningoutcomesin theeducationalprogramasawholewiththeformed competencies

CC	LO1	LO2	LO3	LO4	LO5	LO6	LO7	LO8	LO9	LO10	LO11	LO12	LO13	LO14
CC 1	+					+	+	+	+		+	+		+
CC 2	+	+	+			+	+	+		+	+	+		
CC 3		+	+	+							+	+	+	
CC 4							+		+	+	+	+	+	+
CC 5		+		+	+		+		+					+

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CC 6		+	+	+		+	+						+	+
CC 7	+				+			+				+	+	+

Application1.2

Competence/learning outcome attainment matrix

№	Name of discipline	Brief description of discipline	Cycle (GED, BD, PD)	Component (RC,OC, UC)	Credit number	Generated Learning outcomes
1	Legal, financial, economic, environmental and scientific knowledge	<i>Integrated discipline:</i> based on financial, economic, legal, environmental and scientific knowledge, the formation of one's own moral and civic position; general competencies in dealing with social, business, cultural, financial, legal and ethical norms of Kazakh society for the sustainable development of society self-development and education throughout life, mobility in the modern world and critical thinking; skills in the application of scientific methods and techniques for the study of a particular science.	GED	EC	5	LO1 LO2 LO5 LO13 LO14
2	Fundamentals of anticorruption culture and Entrepreneurial Skills	Formation of an anti-corruption culture. Theoretical and methodological foundations of the concept of "corruption". Political power and corruption. Nepotism. The transformation of corruption in modern states. Anti-corruption policy in the Republic of Kazakhstan and the role of the social sphere in it. Legal responsibility for acts of corruption.	GED	EC		LO1 LO2 LO5 LO13

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3	Fundamentals of economics and law	Formation of knowledge on the fundamentals of constitutional, administrative, civil and family, financial and labor, environmental and land and criminal rights of the Republic of Kazakhstan. The market and competition. Money and inflation. The monetary system. Financial system and fiscal policy. Features of the development of the national economy in the Republic of Kazakhstan. The choice of a business idea and a startup, business planning in the system of entrepreneurial activity, the content of the business plan, the skills of their development. Basic concepts of law and state-legal phenomena.	GED	EC	LO1 LO2 LO5 LO13
4	Financial literacy and entrepreneurial skills	Develops financial literacy and entrepreneurship skills, emphasizing informed decisionmaking, effective resource management, debt control, business planning, risk reduction, and adherence to ethical standards to succeed and adapt responsibly in today's dynamic economy and competitive business environment.	GED	EC	LO1 LO2
5	Ecology, sustainable development and life safety, scientific research methods	Based on environmental, scientific knowledge and sustainable development, the formation of skills: to analyze environmental problems, develop analytical and critical thinking skills when considering environmental problems, identify and study environmental problems, look for cause-effect relationships and propose appropriate solutions; conduct and interpret environmental research: skills of data collection, information analysis and applications of ecological techniques to study natural systems; apply environmental knowledge to analyze and solve problems related to environmental pollution and their impact on the human body. Mastering the methodological foundations of scientific knowledge. Application of scientific research methods in theory and practice.	GED	EC	LO1 LO2 LO5 LO13 LO14

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6	History of Kazakhstan	Formation of the worldview, civil and moral positions of the future specialist based on a deep understanding and scientific analysis of the main stages, patterns and originality of the historical development of Kazakhstan, as well as the ability to use the methods and techniques of historical description to analyze the causes and consequences of events in the history of Kazakhstan.	GED	RC	5	LO1 LO3 LO14
7	Physical education	The formation of a personality that is competitive and capable of physical self-improvement through the skills of building a personal educational trajectory throughout life for self-development and career growth, focused on a healthy lifestyle to ensure full-fledged social and professional activities through methods and means of physical culture.	GED	RC	6	LO1 LO4 LO13
8	Foreign language	Formation of language using skills and speech means based on a system of grammatical knowledge for building communication programs in a foreign language, self-improvement and professional success; communication in oral and written forms in a foreign language to solve problems of interpersonal, intercultural and professional communication; analysis of information in accordance with the communication situation and the ability to interpersonal social and professional communication in a foreign language.	GED	RC	8	LO1 LO2 LO3 LO4

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9	Kazakh (Russian) language	Formation of communication skills in oral and written forms in Kazakh and Russian languages to solve the problems of interpersonal, intercultural and professional communication; analysis of information in accordance with the communication situation and the ability to interpersonal social and professional communication in Kazakh and Russian languages; use of language and speech means based on the system of grammatical knowledge to build communication programs in Kazakh and Russian, professional success and self-improvement.	GED	RC	8	LO1 LO2 LO3 LO4
10	Information and communication technology	The fundamental concepts of information and communication technologies, including the architecture of computer systems, types of software, database systems, data analysis and management, network technologies, cybersecurity, Internet technologies, cloud technologies, multimedia technologies, intelligent technologies.	GED	RC	3	LO1 LO3
11	Philosophy	Formation of skills for assessing the surrounding reality on the basis of worldview positions formed by knowledge of the fundamentals of philosophy, which provide scientific understanding and study of the natural and social world by methods of scientific and philosophical cognition; interpret the content and specific features of the mythological, religious and scientific worldview; skills of quantitative and qualitative. Analysis of social phenomena, processes and problems.	GED	RC	5	LO1 LO3 LO5 LO13
12	The module socio-political knowledge (sociology, political science, cultural studies, psychology)	Apply acquired knowledge for effective socialization and adaptation in changing socio-cultural conditions. Able to analyze social processes, critically comprehend information, apply sociological research methods in various areas. Possesses skills in logical and reasoned analysis of psychological phenomena. Able to perceive and	GED	RC	6	LO1 LO2 LO5 LO13

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		interpret socially significant cultural knowledge, use it in personal and professional activities.				
13	Obstetrics and gynecology	Organization of women's health protection in the Republic of Kazakhstan. The structure, content and methods of work of maternity institutions. Diagnosis of pregnancy. Reproductive health protection. Family planning. Management of childbirth. Extragenital pathology and pregnancy. Regulation of the reproductive system. Methods of examination of gynecological patients. Menstrual irregularities. Inflammatory diseases of the female genital organs. "Acute abdomen" in gynecology. Female infertility. Scientific research in the field of obstetrics and gynecology	BD	UC	3	LO 1 LO2 LO14
14	Biochemistry	Formation of knowledge about the biochemical composition of the human body, about metabolism and its regulation. The influence of adverse environmental factors on body fluids. Composition, structure and biological functions of the most important components of the cell. Biochemistry of enzymes. Organ-specific enzymes of the body. The relationship between metabolism and energy in the body. Stages of metabolism of the main nutrients and their regulation. Functional biochemistry. Influence of harmful environmental factors on metabolic processes. Biochemical markers that determine the state of the body. Research in biochemistry.	BD	UC	4	LO1 LO6
15	Introduction to the clinic	Organization of the work of medical staff and algorithms for performing various manipulations. Principles of care for multidisciplinary patients and the organization of a medical and protective regime. Performing nursing procedures and familiarity with the rules of preparation for instrumental research methods. Safe hospital environment and provision	BD	UC	3	LO1 LO2 LO12

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		of sanitary and anti-epidemic regime. Organization of transportation of patients. Work in the treatment room and maintain medical records.				
16	Introduction to the profession	Formation of the skill of studying the structure of the sanitary and epidemiological service and the professional functions of a specialist in sanitary and epidemiological control, the moral and moral aspects of the professional activity of a hygienist, epidemiologist, the development of a communicative culture, professional competencies, as well as the formation of the skill of using normative legal acts and the basis of inclusion in the activities of workers in the sanitary and epidemiological sphere, instilling the skill of self-assessment and lifelong learning, forming the continuous personal and professional growth of a specialist in the sanitary and epidemiological service.	BD	UC	4	LO1 LO2 LO5 LO12 LO13
17	Genetics and radiobiology	<i>Integrated discipline:</i> fundamentals of the chemical structure of biologically active substances and the genetic apparatus. Molecular and cellular bases of the mechanisms of heredity, patterns of human embryonic development, its critical periods, new molecular-genetic and prophylactic methods for detecting developmental anomalies. The importance of hereditary factors in the etiology of diseases, in the body's response to pharmacological and other treatments. Effects of ionizing radiation on macromolecules, organelles and cell divisions. Radiosensitivity of the body. Research in the field of medical genetics	BD	UC	5	LO1 LO8 LO14
18	Foreign language (professional)	Formation of skills of communicative competence necessary for professional interaction, mastery of a professional foreign language for conducting oral and written communication in a scientific and clinical environment, ensuring continuous improvement of activities using modern information sources and technologies.	BD	UC	3	LO1 LO2 LO11 LO12 LO13 LO14

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19	Artificial intelligence and digitalization in healthcare	Formation of knowledge and skills of orientation in the digital healthcare infrastructure; working with medical information systems, using digital tools to manage processes in a medical organization (accounting, analysis, reporting), analyzing and interpreting data obtained using digital solutions and artificial intelligence to support management decisions, evaluating the effectiveness of the introduction of digital technologies in various segments healthcare; ensuring digital literacy of staff and promoting a culture of using technology in healthcare.	BD	UC	3	LO1 LO3 LO8
20	Clinical epidemiology	Formation of competencies for conducting clinical epidemiological studies using the principles of evidence-based medicine aimed at creating conditions for the protection of citizens' health; for the implementation of a set of measures for early diagnosis, identification of the causes and conditions of their occurrence and development, as well as aimed at eliminating the harmful effects of environmental factors on human health; on the organization and conduct of scientific research, including the choice of goals and formulation of tasks, planning, selection of adequate methods, collection, processing, analysis of data and their public presentation.	BD	UC	4	LO1 LO3 LO7 LO8 LO10 LO14
21	Healthcare management	Formation of knowledge and skills necessary for effective management of healthcare organizations, with an emphasis on the psychological aspects of interaction between managers and subordinates, as well as the influence of psychology on managerial decision-making and organizational culture. Discipline content: Management systems, planning, SWOT analysis and forecasting. Management processes: setting goals and assessing the situation, making managerial decisions. The mechanism of management in healthcare. Digitalization of healthcare. Fundamentals of psychology in the context of management. Psychological aspects of leadership and motivation	BD	UC	3	LO1 LO2 LO3 LO4 LO5

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22	Microbiology and Parasitology	<i>Integrated discipline:</i> Morphophysiology and genetics of microorganisms, etiopathogenesis, immunity, laboratory diagnostics, prevention and etiotropic therapy of major bacterial, viral, fungal and parasitic diseases. Parasitism as an ecological phenomenon. Classification of parasitic diseases. Medical protistology. Medical helminthology. Medical arachnoentomology. Research in the field of microbiology	BD	UC	6	LO1 LO8 LO9 LO13 LO14
23	Morphophysiology	<i>Integrated discipline:</i> the formation of fundamental knowledge aimed at understanding the morphological and functional characteristics of the human body, its topical basis. Anatomy, Physiology and histology of organs and systems are normal: musculoskeletal, skin, nervous, sensory systems, cardiovascular, respiratory, digestive, endocrine, hematopoietic, immune, blood system, urinary, sexual. Scientific research in morphophysiology.	BD	UC	8	LO1 LO13
24	General hygiene	Formation of knowledge about hygienic standards, rules and methods for assessing the state of the environment, the impact of environmental factors on health, skills in hygienic assessment and analysis of the state of the environment, living and working conditions using digital technologies, development and implementation of scientifically sound and effective programs, measures for the prevention of diseases, promotion of a healthy lifestyle; information and educational work among the population in compliance with the principles of inclusion on hygiene and health issues.	BD	UC	5	LO1 LO5 LO6 LO7 LO12 LO13
25	General pathology	<i>Integrated discipline:</i> the formation of fundamental knowledge about the patterns of development of typical general pathological processes for the diagnosis of the most common diseases; skills of pathophysiological analysis of clinical and laboratory data, description of macro- and	BD	UC	6	LO1 LO6 LO13 LO14

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		micropreparations, understanding of the pathophysiological foundations for the prevention and treatment of various diseases. Etiopathogenesis, morphogenesis, morphology, outcome.				
26	Fundamentals of pharmacology	General regularities of pharmacodynamics and pharmacokinetics of medicinal substances in medicine. Primary pharmacological reactions. General principles of registration of recipes and preparation of prescription prescriptions. Calculation of doses and concentrations of medicinal substances. Classification of medicines. Comparative assessment of the pharmacological properties of anesthetics: anesthetic activity, effect on the central nervous system, ability to penetrate mucous membranes, toxicity. Adverse drug reactions, methods of prevention and correction of side effects.	BD	UC	4	LO1 LO13
27	Project activity and biostatistics	Formation of knowledge about methods and tools of project management in medicine, skills of planning, organization and project management; systematic review of literature and synthesis of scientific data; skills to communicate and collaborate within project teams; analyze and predict risks and effectiveness of projects in healthcare, critically analyze scientific research in medicine; practical skills in using descriptive statistics and hypothesis testing theory in biomedical, sanitary, and epidemiological research, as well as processing statistical data using advanced digital technologies to identify patterns and predict risks.	BD	UC	6	LO2 LO3 LO8 LO14
28	Propaedeutics of internal diseases	Subjective (questioning) and objective examination (palpation, percussion and auscultation). Understanding the basics of semiotics and syndromology. To justify the need for the collected material on the use of basic methods of clinical examination for diseases of internal organs. Filling out medical documentation. Planning of laboratory and instrumental studies. Basics of communication when communicating with patients. Improvement of knowledge and	BD	UC	3	LO1 LO2 LO12 LO13

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		skills, continuous professional development.				
29	Emergency medical care	Basic principles of first aid. The rights of the patient in the provision of emergency care. Antiseptics and asepsis. First aid to victims with soft tissue injuries. First aid for blood loss. First aid for chemical, thermal, radiation burns. First aid for bruises. Resuscitation. Basic cardio pulmonary resuscitation (CPR). Advanced cardiopulmonary resuscitation (ACR).	BD	UC	4	LO1 LO2 LO5
30	Chemistry and laboratory research techniques	Formation of knowledge and skills of the basics of qualitative and quantitative analysis, titration technique in sanitary and hygienic examination of environmental objects. General laws of chemistry necessary for understanding physicochemical processes and the impact of the environment on the human body. Understanding the relationship between the chemical composition, structure, properties and biological activity of organic substances. Preparation of solutions of various concentrations used in sanitary hygiene. Registration of results.	BD	UC	3	LO1 LO6 LO8
31	Educational practice «As a laboratory assistant in a hygienic laboratory»	Skills of organizational support for the performance of laboratory and instrumental studies of human environmental factors, applied methods/methods of their determination and confirmation of compliance with the requirements of legislation in the field of sanitary and epidemiological well-being of the population. Methods of sampling and registration of accompanying documentation, research, interpretation, registration and statistical processing of results, sanitary-chemical, physical, toxicological studies depending on the sanitary-epidemiological situation.	BD	UC	1	LO1 LO2 LO3 LO5 LO6 LO13
32	Educational practice «As a	Tasks, structure, equipment, rules of work and safety in the microbiological laboratory; acceptance, registration, selection of	BD	UC	1	LO1 LO2

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	laboratory assistant o fa microbiological laboratory»	clinical material, samples of environmental objects and food products; preparation of the test material, nutrient medium, reagents and equipment for microscopic, microbiological and serological studies; conducting microbiological studies of clinical material, samples of environmental objects and food products; evaluation of the result of the research; Maintenance of accounting and reporting documentation				LO6 LO8 LO12
33	Bioethics of scientific research in health care	Scientific research in health care: types, goals, objectives. Features of the organization and conduct of scientific research on public health. Normative legal acts regulating activities in the field of scientific research. Principles, rules of biomedical ethics. Standard Operating Procedures. Ethics committees: goals, functions, requirements for participants. Informed consent. Conflict of interest. Ethical requirements for the publication of research results.	PD	UC	3	LO1 LO5 LO14
34	Hygiene of children and adolescents	Methods of studying and assessing the health and physical development of children and adolescents. Food hygiene or children and adolescents. Hygiene of educational activities, physical education of children and adolescents, hardening. Hygiene of labor education, training and vocational education of students. Hygienic foundations of the design and construction of institutions for children and adolescents. Hygienic requirements for the improvement and equipment of children's and adolescent institutions. Normative documents and State sanitary-epidemiological supervision in the field of hygiene of Children and adolescents.	PD	UC	6	LO1 LO3 LO5 LO6 LO7 LO8 LO11 LO12 LO13
35	Food hygiene	Healthy nutrition of the population. Sanitary protection of food products and ensuring the safety of food raw materials and food products, the conditions for their production and sale, including at	PD	UC	7	LO1 LO3 LO5

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		public catering establishments. Hygienic aspects of the problem of nutrition of the population. Prevention of alimentary diseases. Hygienic control over the adequacy of nutrition of the population. Hygienic assessment of diets. Therapeutic and prophylactic nutrition. Food poisoning and their prevention. Sanitary and epidemiological examination of food products. Normative documents in the field of food hygiene.				LO6 LO7 LO8 LO11 LO12 LO13
36	Occupational hygiene	Occupational hygiene and industrial sanitation. Regulatory documents in the field of occupational health. Sanitary and hygienic requirements for the territory, the arrangement of buildings and premises of the institution (organization). Rationing of the industrial microclimate. Harmful production factors, their effect on the body of workers and their prevention. Occupational and industrial-related diseases and poisoning, and their prevention. Medical monitoring of working conditions and the state of health of workers. Medical examinations. Certification of workplaces. Promotion of healthy lifestyle.	PD	UC	6	LO1 LO3 LO5 LO6 LO7 LO8 LO11 LO12 LO13
37	State sanitary and epidemiological control	Legal framework for State sanitary and epidemiological supervision (SSEK). The main legal acts regulating the provision of sanitary and epidemiological welfare of the population. Criteria for the selection of objects of supervision. Implementation of the supervisory function by the state sanitary and epidemiological surveillance bodies. Types of control and supervisory measures. The procedure for the provision of public services. Information and methodological support of activities. Preventive, routine sanitary supervision. Methods of sanitary and epidemiological control. Monitoring compliance with sanitary requirements and regulations. Accounting and reporting documentation and information systems	PD	UC	4	LO1 LO3 LO5 LO6 LO7 LO8 LO9 LO10 LO11 LO12 LO13

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		in the SSEK. Forms and methods of sanitary and educational work. Criteria for assessing the degree of risk in the field of sanitary and epidemiological well-being.				
38	Disinfection and disposal of medical waste	<i>Integrated discipline:</i> Organization of disinfection in the Republic of Kazakhstan. Disinfection tasks. Disinfection in a complex of preventive and anti-epidemic measures. Types, methods and means of disinfection. Preventive disinfection. Indications and means for preventive disinfection. Focal disinfection. Current and final disinfection, and means for their implementation. Stages of collection, temporary storage and transportation of medical waste. Requirements for the collection of medical waste. Procedure for the collection of waste class A, B, C, D, E. Rules for the collection of medical waste. Requirements for the conditions of temporary storage (accumulation) of medical waste. Accounting and control over the movement of medical waste.	PD	UC	6	LO1 LO3 LO9 LO10 LO12
39	Infectious diseases	Formation of knowledge on early diagnosis of infectious diseases, on infection safety and infection control in a medical and preventive organization, the use of preventive measures against infections associated with the provision of medical care. Rules for hospitalization of infectious patients. The structure and regime of infectious diseases hospitals. Infectious diseases. Etiology. Pathogenesis. Clinic. Diagnostics. Principles of treatment and prevention. Indications for hospitalization. Specific, general prevention of infectious diseases, anti-epidemic measures in foci.	PD	UC	5	LO1 LO3 LO9 LO10 LO12
40	Infection control in medical organizations	Healthcare-associated infections (HAIs), scientific and organizational frameworks. Specificity of HAI in various medical organizations. Improvement of work in order to reduce HAI. Causes and signs of an infectious focus. Types of infectious focus. Regulatory documentation on disinfection, sterilization, pest	PD	UC	3	LO1 LO3 LO5 LO9 LO10

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		control and deratization.				LO12
41	Information Systems and Document Management in the State Sanitary and Epidemiological Control	<p>The concept of the state office management system. Fundamentals of office management in organizations State sanitary and epidemiological control. The procedure for the promotion of documents. Types of documents: regulatory and technical, organizational and administrative, accounting and reporting. Requirements for the preparation and execution of documents. The importance of new regulatory documents of the Republic of Kazakhstan in the field of State sanitary and epidemiological control. Preparation of draft decisions (resolutions, etc.) Work on applications and complaints of the population. Uniform requirements in the field of information and communication technologies and information security. Information and communication technologies in the State sanitary and epidemiological control. The concept of digitalization of the sanitary and epidemiological service of the Republic of Kazakhstan. A single automated system for receiving, processing and storing information and documents between the committee and other organizations.</p>	PD	UC	5	LO1 LO3 LO5 LO8
42	Communal hygiene	<p>Study of the state of environmental objects (water bodies, drinking water, atmospheric air, soil, harmful physical factors, artificial habitat) within residential areas, in order to study their quality in accordance with applicable sanitary rules and regulations. Sanitary and epidemiological supervision of the organization of water supply and sewerage of populated areas, sanitary cleaning of territories, waste management, quality of polymer and building materials, design and construction of residential and public buildings and</p>	PD	UC	8	LO1 LO3 LO5 LO6 LO7 LO8 LO11 LO12

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		facilities with the preparation of expert and sanitary-epidemiological conclusions. Development of as set of preventive measures to ensure optimal conditions for accommodation and residence of the population.				
43	Laboratory tests in hygiene and epidemiology	Skills of methodological, technical organizational support for the implementation of laboratory and instrumental studies of human environmental factors, methods (techniques) for their determination and confirmation of compliance with the requirements of legislation in the field of sanitary and epidemiological welfare of the population. Determination of the algorithm: multiplicity and volume, sampling methods and preparation of accompanying documentation, research, interpretation, design and statistical processing of results, sanitary-chemical, physical, toxicological, microbiological and radiological studies in the field of hygiene and epidemiology, depending on the sanitary-epidemiological situation.	PD	UC	4	LO3 LO5 LO6 LO7 LO8
44	Medical legislation	Legislation of the Republic of Kazakhstan in the field of healthcare, goals, objectives, principles. Licensing, accreditation, attestation and certification in the field of healthcare. Rights and social protection of officials in the implementation of state control and supervision in the field of sanitary and epidemiological welfare of the population. Rights and obligations of persons in the field of health care. Organization of medical care. Liability for violation of medical legislation.	PD	UC	3	LO1 LO2 LO5
45	Management of scientific research in health care	International and national standards and other legal acts governing the rules and principles of the organization, conduct and ethical regulation of research in the field of healthcare. Elements of the research project. Development of a research program and plan. Formulation of the topic, purpose and objectives of the study. Formulation of conclusions, recommendations and preparation of	PD	UC	3	LO1 LO5 LO6 LO14

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		reports on research work.				
46	Normative legal acts in the field of state sanitary and epidemiological control	Provision of public services in the field of sanitary and epidemiological welfare of the population. Provision of public services in the field of sanitary and epidemiological welfare of the population. The list of current regulatory legal acts (sanitary rules, hygienic standards). Regulatory and legal documents on the main activities of the sanitary and epidemiological service. Information support system in the field of state sanitary and epidemiological control. Prospects for the use of artificial intelligence in the field of sanitary and epidemiological welfare of the population. The role of artificial intelligence in the search for regulatory legal acts.	PD	UC	5	LO1 LO3 LO5 LO9
47	Public health and the foundations of evidence-based medicine	Formation of knowledge about the principles, basic concepts, methods and tools of public health, skills in developing and implementing disease prevention programs. Training in methods of collecting, analyzing and interpreting data using digital technologies necessary to assess the health status of the population and the effectiveness of interventions. Development of critical thinking in the field of evidence-based medicine, training in the evaluation and interpretation of scientific data and research to make informed decisions and develop programs and recommendations for the prevention and treatment of diseases based on evidence-based medicine. The ability to work in interdisciplinary teams and communicate effectively with different populations while respecting the principles of inclusion.	PD	UC	6	LO1 LO2 LO3 LO8 LO12 LO14
48	Environment and public health	Formation of knowledge about environmental factors and their impact on human health; skills in identifying and assessing environmental risks, conducting research, monitoring and analyzing	PD	UC	5	LO2 LO3 LO5

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		data using digital technologies and artificial intelligence related to environmental impacts on human health; skills in working with legislative and regulatory documents for environmental protection and public health; effective communication and work with authorities and the public on environmental and health issues; integration of knowledge, self-development and observance of social and ethical standards.				LO6 LO7
49	Organization, economics and financing of healthcare	Modern healthcare, global trends in developed countries. Public health policy. Modern theories and concepts of public health. Rules for the organization and provision of medical care in the conditions of OSMS. Information technologies in the healthcare management system. Quality control of medical services. Administrative-legal relations in healthcare. Labor legislation. Medical, social and economic efficiency of healthcare. The need for medical care and the demand for medical services. Pricing. Financing of healthcare. Economic assessments in healthcare: cost minimization method, cost-effectiveness method, cost-utility method, cost-benefit method	PD	UC	6	LO1 LO3 LO8 LO11 LO12
50	Fundamentals of surgical diseases and injury prevention	Formation of skills in the organization of primary surgical care. Aseptic and antiseptic. Injuries, burns and care for them. Wounds and wound process. Types of surgical sutures. Bleeding and blood loss. Local and regional anesthesia in surgery. General anaesthesia. Issues of ethics and deontology in surgery. Fundamentals of surgery, analysis of the course of surgical diseases and their complications. Issues of etiology, pathogenesis, clinic, diagnosis and differential diagnosis, modern methods of conservative and surgical treatment of emergency and planned surgical diseases of organs and systems. Clinical thinking, skill, application of algorithms of medical activity in urgent and life-threatening conditions and methods of anesthesia for injuries, traumatic injuries, injury prevention. Improving knowledge and skills	PD	UC	3	LO1 LO2 LO13

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51	Occupational health and safety	State policy in the field of occupational health and safety. Occupational health and safety management system. The main legislative acts and regulatory documents on labor protection of the Republic of Kazakhstan and of international importance. Harmful and dangerous factors and conditions of the working environment. Legal, socio-economic, organizational, technical, sanitary-epidemiological, treatment-and-prophylactic, rehabilitation measures for labor protection. Promotion of healthy lifestyle.	PD	UC	4	LO1 LO2 LO3 LO15 LO8 LO12 LO13
52	Disease prevention	Formation of healthy lifestyle skills for the purpose of health promotion, organization and control of immunopathology and vaccine prevention of the population, observing the principles of inclusion. Health promotion, principles. Quality of life, health and longevity. Basics of healthy lifestyle propaganda. Risk factors. Disease prevention. Maternal and child health. Organization of vaccination work. Equipment and equipment of the vaccination room. National Vaccination Calendar. Routine immunoprophylaxis of children and adolescents. Tactics of preventive vaccinations. Prevention and investigation of post-vaccination complications.	PD	UC	5	LO1 LO2 LO3 LO10 LO12 LO13
53	Radiation Hygiene and Medical ecology	<i>Integrated discipline:</i> Formation of knowledge about the purpose and objectives of radiation hygiene, about the basic laws of the interaction of ionizing radiation on the body of the population, measures to prevent their adverse effects and the organization of a set off medical and preventive measures aimed at improving the Level of health and reducing non-communicable morbidity of various contingents of the population, assessing the impact of the radiation factor on health and providing radiation public safety. Basic principles of radiation safety. Medical ecology, classification of environmental risk factors affecting public health. Xenobiotics. Indicators of public health as one of the criteria for assessing the	PD	UC	7	LO1 LO3 LO6 LO7 LO9 LO10 LO11 LO12

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		quality of the environment.				
54	Sanitary and epidemiological audit	Sanitary and epidemiological audit. Regulatory documents and the procedure for conducting a sanitary and epidemiological audit. Exemption from scheduled inspections and documents of compliance with sanitary standards and requirements. Requirements for auditors. Auditor's report and the procedure for its issuance.	PD	UC	4	LO1 LO3 LO5 LO9 LO10 LO11
55	Sanitary-epidemiological expertise	Legislative, regulatory and legal acts in the field of organization of sanitary and epidemiological expertise (SEE). Objects and procedure for conducting SEE. Features of the SEE in the field of radiation hygiene, food hygiene, labor, children and adolescents, project documentation. The procedure for issuing sanitary and epidemiological conclusions.	PD	UC	4	LO1 LO3 LO5 LO8 LO10 LO11
56	Statistics in healthcare	The concept of statistics. Medical Health and Health Statistics. Demographic statistics. Medical records of health care institutions. Organization and stages of medical and statistical research. Standardization method. The main errors of statistical analysis. Methods of studying and assessing the health of the population, the activities of health care organizations. Graphical representation of the results of statistical research.	PD	UC	4	LO1 LO3 LO8
57	Technical regulations in sanitary and epidemiological control	Formation of skills in studying and applying technical regulations in the field of sanitary and epidemiological welfare of the population, technical regulations of the Customs and Eurasian Economic Unions in the field of food hygiene, children and adolescents and labor, municipal and radiation hygiene; as well as State control over compliance with the requirements of the relevant technical regulations defined by the Government of the Republic of	PD	UC	4	LO1 LO3 LO3 LO5 LO9

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		Kazakhstan, at the stages of the product life cycle, production, sale (including storage, transportation and disposal during the sale of food products.				
58	Phthisiology	Formation of knowledge skills, the ability to organize tuberculosis care for the population, infectious tuberculosis control in medical institutions and work in tuberculosis foci, as well as identify cases of tuberculosis, diagnose and clinical forms, as well as skills in tuberculosis prevention and medical records.	BD	UC	4	LO1 LO8 LO9 LO10
59	Epidemiological control of infectious and parasitic diseases	Formation of knowledge, practical skills on infectious and parasitic diseases that require measures for the sanitary protection of the country's territory, clinical and epidemiological characteristics of individual nosological forms, the actions of medical personnel in identifying a patient, information and notification schemes, treatment and emergency prevention, kits, rules for sampling, transportation of material, the use of personal protective equipment, the mode of disinfection of various objects infected with pathogenic microorganisms. Methodology for assessing the risk to public health. Algorithm for collecting, storing (database), systematizing data necessary for epidemiological surveillance of infectious diseases based on official statistics and specially organized studies. Regulation sin the field of epidemiological control of infectious and parasitic diseases. Assessment of biological risks. Accounting and monitoring in the field of biological safety. Prevention in the field of biological safety.	PD	UC	4	LO1 LO3 LO5 LO8 LO10 LO11 LO12 LO14
60	Epidemiological surveillance of noncommunicable diseases	An epidemiological approach to the study of noncommunicable diseases (NCDs). Causality in epidemiology. Risk factors for non-communicable diseases in the human population. Epidemiological studies. Epidemiology of non-communicable pathology. State	PD	UC	3	LO1 LO3 LO7 LO8

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		system of monitoring the state of health of the population. Fundamentals of the epidemiology of actual non- communicable diseases (theoretical and methodological foundations). Epidemiology of environmentally caused and cardiovascular diseases. Methodology for assessing the risk to public health. Algorithm for collecting, storing (database), systematizing data necessary for epidemiological surveillance of non-communicable diseases based on official statistics and specially organized studies.				LO11 LO12 LO14
61	Epidemiological control of especially dangerous infections	Formation of knowledge and practical skills on especially dangerous infections (EDI) requiring measures for the sanitary protection of the country's territory, clinical and epidemiological characteristics of individual nosological forms, actions of medical personnel in identifying a patient, information and notification schemes, treatment and emergency prevention, packing, rules of sampling, transportation of material, use of personal protective equipment protection, disinfection regime of various objects infected with pathogenic microorganisms. Methodology of public health risk assessment. An algorithm for collecting, storing (databases), and systematizing data necessary for epidemiological surveillance of EDI based on official statistics and specially organized studies. Regulatory acts in the field of epidemiological control of EDI. Fundamentals of the organization of biological safety in healthcare institutions.	PD	UC	4	LO1 LO3 LO5 LO8 LO 9 LO10 LO11 LO12 LO13 LO14
62	Epidemiology	Formation of knowledge about the general laws of the emergence, development and extinction of the epidemic process of infectious diseases, about monitoring the effectiveness of disinfection, sterilization measures. Methods of epidemiology. Links of the epidemic process. Mechanisms, pathways and factors of transmission of infectious diseases. Preventive and anti-epidemic measures in the foci of infections. Epidemiological surveillance, analysis and diagnosis. The Law "On Biological Safety of the	PD	UC	4	LO1 LO7 LO9 LO10

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		Republic of Kazakhstan", Principles of ensuring biological safety, the main biological threats, criteria and classifications in the field of biological safety. Biological risk management, implementation of activities related to the management of pathogenic biological agents (PBA-I-IV groups), accounting and monitoring in the field of biological safety.				
63	Epidemiology of emergency situations, organization and conduct of sanitary and quarantine control	Fundamentals of anti-epidemic support for emergency situations (ES). Features of antibacterial support of emergencies. Biological terrorism. Epidemiology, prevention and anti-epidemic support of quarantine infections. Sanitary protection of the territory of the Republic of Kazakhstan. Organization of sanitary and quarantine control at the State Border of the Republic of Kazakhstan. List of quarantine infections. Organization of quarantine and observation. The procedure for the interaction of services in the event of the importation of quarantine infections. Functions of the UPC. The procedure for transmitting information in case of suspected quarantine infection. Carrying out general and special prophylaxis of the population. Regulatory documents on sanitary and quarantine control.	PD	UC	4	LO1 LO2 LO3 LO5 LO6 LO7 LO9 LO10 LO11 LO12
64	Industrial practice«As a specialist in radiation hygiene»	Principles of placement and layout of laboratories of varying degrees of danger. Sealing of equipment. Features of the organization of ventilation, water supply and sewerage. Requirements for construction and cladding materials, surfaces of premises and equipment. Personal protective equipment. Personal hygiene of staff. Cleaning of equipment and overalls from radioactive contamination. Collection, storage, transportation, neutralization, disposal of radioactive waste. Sanitary and dosimetry control. Therapeutic and preventive measures.	PD	UC	2	LO1 LO3 LO6 LO7 LO9 LO11 LO12

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65	Industrial practice «As a specialist in the field of hygiene and epidemiology»	Organization and content of the work of specialists in sanitary-hygienic and epidemiological control. Implementation of control and supervisory functions in the field of sanitary and epidemiological welfare of the population. Carrying out sanitary and anti-epidemic (preventive) measures. Laboratory instrumental studies at the objects of supervision and analysis of the results. Documentation; research activities: analysis of scientific literature and official statistical reviews, participation in statistical analysis and public presentation of the results obtained; participation in risk assessment in the implementation of activities related to the impact of environmental factors on humans.	PD	UC	5	LO1 LO2 LO3 LO4 LO5 LO6 LO7 LO8 LO9 LO10 LO11 LO12 LO13
66	Experimental research work				13	
67	Writing and defending a master's project and preparing and passing a comprehensive exam				12	
					300	

Application1.3

List of practical skills for the «Medical and Preventive Medicine» program

№	Inventory	Level of mastery
1	Identify determinants of individual and population health, problems and threats to sanitary and epidemiologic well-being.	Be able
2	To know the methods of assessment and study of public health. Organize and conduct anti-epidemic and preventive measures.	Conduct under the guidance of a mentor
3	Manage data from designed and implemented interventions, use it for scientific and	Organize and conduct under the supervision of a

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	practical purposes.	mentor
4	To possess methods of assessment of water, soil, air quality, microclimate parameters, lighting, heating and ventilation in residential, public and industrial premises, to recommend measures for their organization.	Independently apply and master
5	To organize epidemiological control and supervision over infectious and non-infectious diseases, the state of environmental objects. To support and promote sanitary and epidemiological well-being of the population.	Independently organize and analyze