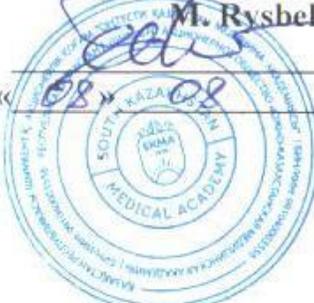


ОҢТҮСТІК ҚАЗАҚСТАН MEDISINA АКАДЕМИЯСЫ «Оңтүстік Қазақстан медицина академиясы» АҚ		SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия»
Educational and methodological center Educational program	Ident.number 1 pafe out. of 27	

"I APPROVE"
Rector of SKMA
M. Rysbekov


 «08» 08 2022

EDUCATIONAL PROGRAM PEDIATRICS

EP code: 6B 10102

Name of the educational program: Pediatrics

Educational program level: bachelor

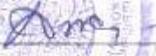
Shymkent

The educational program was developed by the members of the CPC "Pediatrics"

Head of the Department of Pediatrics-2nd Candidate of Medical Sciences, Professor  G.E. Bektenova.

Head of the Department of Pediatrics-1 PhD  Kemelbekov K.S.

Agreed with employers:

Chief Physician of the Shymkent Clinical Children's Hospital  Zhumadilova D.A.

Chairman of the COP "Pediatrics"  Kemelbekov K.S.

Protocol No. 11^o of 08.08.22

Approved by the Methodological Council

Vice-rector for Educational-Methodical and Educational work Anartayeva M.U

U. Protocol no. 13 from 08 08 2022.

Approved by the Academic Council

Protocol no. 15 from 08 08 2022.

General information

№	Characteristics of the OP	Data
1	Registration number	
2	Code and classification of the field of education	6B10 Health and social welfare (medicine)
3	Code and classification of training areas	6B101 Healthcare
4	Group of educational programs	Pediatrics
5	Code, Name of the educational program	6B10102 "Pediatrics"
6	Type of the EP	New OP
7	The purpose of the EP	The formation of students' supra-professional and professional competencies, the disclosure of creative potential and the possibility of self-realization of each individual.;
8	ISCED level	6
9	The level of the NRK	6
10	ORC Level	6
11	Distinctive features of the OP	No
	Partner University (SOP)	-
	Partner University (DDOP)	-
12	Core competencies	<p>CC-1. demonstrate and put into practice knowledge in the field of biomedical, clinical, epidemiological and socio-behavioral sciences, including generally accepted, developing and constantly updated knowledge, synthesis of professional and scientific medical knowledge for the provision of qualified medical care</p> <p>CC -2 demonstrate interpersonal and communication skills that lead to effective information exchange and cooperation with patients, their families and medical professionals, including using information technology, effectively interact with the patient, his environment, and healthcare professionals in order to achieve the best results for the patient</p> <p>CC -3 provides effective patient-centered care, which includes appropriate and effective measures aimed at the diagnosis, treatment and prevention of diseases, the implementation of qualified medical</p>

		<p>care of the basic category of complexity. Defining a strategy for providing qualified medical care to the population of the second category of complexity</p> <p>CC -4 demonstrate commitment to professional duties and ethical principles. Coordination of activities in healthcare organizations. The ability to make decisions and be responsible for the result of providing qualified medical care</p> <p>CC -5. demonstrate the qualities necessary to maintain continuous personal and professional growth, continuous improvement of the quality of medical care based on constant self-assessment and lifelong learning. The ability to learn independently and train other members of a professional team, actively participate in discussions, conferences and other forms of continuous professional development</p> <p>CC -6. be aware of and demonstrate responsibility for their actions within the framework of the current regulatory framework of the healthcare system and be guided by them in their practical activities to ensure optimal medical care. The ability to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan</p> <p>CC -7. The ability to research and evaluate the results of their professional activities, to apply the principles of diagnosis of diseases based on scientific data. The application of modern research methods in healthcare, taking into account bioethics and the introduction of clinical practice</p>
13	Learning outcomes	<p>LO1. Determines the indications for hospitalization of sick children, in an emergency or planned manner..</p> <p>LO2. Demonstrates knowledge and understanding of biomedical sciences for diagnostics, treatment, dynamic observation with the most common diseases in children.</p> <p>LO3. Performs dynamic monitoring of healthy and sick newborns in preventive institutions of a pediatric profile, carries out the necessary diagnostic and therapeutic and preventive measures.</p> <p>LO4. Implements and controls vaccine prevention, examination of children and adolescents, rehabilitation programs.</p> <p>LO5 Communicates effectively (communicates information, ideas and conclusions, problems and their solutions) in medical practice with specialists and the public, observing the principles of medical ethics, deontology and legal norms.</p> <p>LO6. Owns information technology, efficiently uses health information to introduce new approaches as part of its qualifications.</p> <p>LO7. Provides emergency qualified medical care for all age categories of patients..</p> <p>LO8. Applies scientific principles, methods and knowledge in medical practice and research. Capable of continuous self-education and development.</p>

		<p>LO9. On the basis of evidence-based medicine on an outpatient basis, it conducts reception, diagnosis, treatment and dynamic observation of the child population.</p> <p>LO10. Complies with the principles of organization and management in the field of children's health protection in medical organizations and their structural divisions.</p>
14	The form of education	Full-time
15	The language of instruction	Kazakh, Russian and English
16	The duration of the training	5 years
17	Volume of loans	300
18	Academic degree awarded, qualification	bachelor
19	Availability of an appendix to the license for the direction of training	
20	Availability of OP accreditation	there is
	Name of the accreditation body	NU “Independent Accreditation and Rating Agency” IAAR
	Certificate of accreditation No., validity period of accreditation	
21	Information about the disciplines	Appendix 1.2

**The matrix of correlation of learning outcomes according to the educational program
as a whole with the competencies being formed**

CC	LO	LO 1	LO 2	LO 3	LO 4	LO 5	LO 6	LO 7	LO 8	LO 9	LO 10
CC 1		+	+	+	+	+	+	+	+	+	+
CC 2		+	+	+	+	+		+		+	
CC 3						+	+			+	+
CC 4		+	+	+					+	+	
CC 5		+	+	+	+	+	+	+		+	
CC 6						+	+	+	+	+	
CC 7		+	+	+	+	+	+	+		+	+

Learning outcomes

LO1. Determines the indications for hospitalization of sick children, in an emergency or planned manner..
LO2. Demonstrates knowledge and understanding of biomedical sciences for diagnostics, treatment, dynamic observation with the most common diseases in children.
LO3. Performs dynamic monitoring of healthy and sick newborns in preventive institutions of a pediatric profile, carries out the necessary diagnostic and therapeutic and preventive measures.
LO4. Implements and controls vaccine prevention, examination of children and adolescents, rehabilitation programs.
LO5 Communicates effectively (communicates information, ideas and conclusions, problems and their solutions) in medical practice with specialists and the public, observing the principles of medical ethics, deontology and legal norms.
LO6. Owns information technology, efficiently uses health information to introduce new approaches as part of its qualifications.
LO7. Provides emergency qualified medical care for all age categories of patients..
LO8. Applies scientific principles, methods and knowledge in medical practice and research. Capable of continuous self-education and development.
LO9. On the basis of evidence-based medicine on an outpatient basis, it conducts reception, diagnosis, treatment and dynamic observation of the child population.
LO10. Complies with the principles of organization and management in the field of children's health protection in medical organizations and their structural divisions.

Matrix of achievability of competencies/learning outcomes						
№	Name of the discipline	A brief description of the discipline	Cycle (GES, BD, SD)	Component (RC, UC, OC)	Credit number	EP Learning outcomes
1	History of Kazakhstan	Formation of the ideological, civil and moral positions of a future specialist based on a deep understanding and scientific analysis of the main stages, patterns and peculiarities of the historical development of Kazakhstan, as well as the skills of using methods and techniques of historical description to analyze the causes and consequences of events in the history of Kazakhstan	GES	RC	5	LO1 LO10
2	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.	GES	RC	8	LO1
3	Foreign language	Formation of skills in using language and speech tools 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; information analysis in accordance with the communication situation and the ability to interpersonal social and professional communication in a foreign language in a foreign language.	GES	RC	10	LO1 LO2 LO3

4	Kazakh (Russian) Language	Formation of communication skills in oral and written forms in Kazakh and Russian languages 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 Kazakh and Russian languages; use of linguistic and speech means based on a system of grammatical knowledge to build communication programs in Kazakh and Russian, professional success and self-improvement.	GES	RC	10	LO1 LO2 LO3
5	Information and communication technology	Formation of skills in information and communication technologies that contribute to the development of information literacy through the mastery and use of modern technologies in all spheres of their lives and activities; the use of various types of information and communication technologies in personal activities: Internet resources, cloud and mobile services for the search, storage, processing, protection and dissemination of information, etc.	GES	RC	5	LO2 LO3
6	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.	GES	RC	5	LO2 LO3

7	Psychology and Cultural Studies	Formation of general competencies that ensure the socio-cultural development of the personality of a future specialist based on the formation of his ideological, civic and moral positions; skills of self-development and education throughout life; personality capable of mobility in the modern world, critical thinking; skills of operating with social, business, cultural and ethical norms of Kazakhstani society; skills of personal and professional competitiveness.	GES	RC	4	LO1 LO2 LO3
8	Sociology and political science	Formation of socio-political knowledge, skills of application, generalization of scientific research methods. Sociology and the sociological perspective. Social structure and stratification. Education and social inequality. Health and medicine. The civilizational identification of Kazakhstan in the global world. Politics in the structure of public life. Power as a political institution. The State and civil society. Political culture, ethics and behavior. Sovereign Kazakhstan in the system of interstate relations.	GES	RC	4	LO1 LO3
9	Basics of law and Economics	Legal education and development of anti-corruption culture of future specialists within the framework of the state program "Rukhani zhangyru". The legal status of medical workers, their social security. The Code of the Republic of Kazakhstan "On the health of the people and the healthcare system". The market and competition. Theory of the firm and entrepreneurship. Features of the development of the national economy in the Republic of Kazakhstan. State policy in the field of medical industry development.	GES	OC	5	LO 5 LO 8
10	Ecology and life safety	The place and role of ecology in solving modern economic and political problems. Nature protection and environmental problems of our time. Problems of ecological development. The concept of sustainable development. Organizational foundations of life support. sanitary and hygienic and anti-epidemic measures. Organization and planning of medical supplies. Psychological aspects of emergency situations.	GES	OC	5	LO 5 LO 8

11	Anatomy	Systematic description of body parts and organs: Respiratory system; Cardiovascular system; Digestive system; Hematopoietic system; Immune system; Genitourinary system; Endocrine system; Nervous system; Sensory organs; Musculoskeletal system, skin. The structure, functions, anatomical and topographic location of organs, their blood supply, innervation, venous and lymphatic outflow. Age, gender and individual characteristics.	BD	UC	5	LO 2 LO 6 LO 8
12	Hystology	Morphofunctional characteristics of organs and systems: - nervous system, - sensory organs, - cardiovascular system, - hematopoiesis and immune protection, - endocrine system, - digestive system, - respiratory system, - skin and its derivatives, musculoskeletal system, - urinary system - reproductive system.	BD	UC	3	LO 2 LO 6 LO 8
13	Medical biochemistry-1	Protein biochemistry: classification, structure, properties, biological functions. Biological membranes, transmembrane signal transmission. Bioenergy. Specific, common pathways of catabolism. Oxidative decarboxylation of pyruvate, tricarboxylic acid cycle. Oxidative phosphorylation. Metabolism of carbohydrates, lipids, and proteins. The basics of rational nutrition. Biochemical studies to determine the intermediates of carbohydrate, lipid, and nitrogen metabolism in human biofluids. Interpretation of the analysis results.	BD	UC	4	LO 3 LO 10
14	Medical biochemistry-2	Hormonal regulation of metabolism and body functions. Biochemistry of nervous tissue, muscle tissue, intercellular matrix, bone and tooth tissue, liver. Neutralization of toxic substances in the body. Oncogenesis. Metabolism of hemoproteins. Blood biochemistry: biochemical constants of blood and other biological fluids are normal, their changes in case of violation of biochemical processes in the body.	BD	UC	3	LO 3 LO 10
15	Microbiology and immunology-1	Classification, morphology and physiology of microorganisms and viruses, their impact on human health, methods of microbiological diagnosis. The technique of	BD	UC	4	LO 2 LO 4 LO 6

		preparing a microscopic preparation from pathological material and staining microorganisms.				LO 9
16	Microbiology and immunology-2	Gram-positive and gram-negative bacteria, their microbiological diagnosis. DNA-genomic and RNA-genomic viruses are oncogenic viruses. Retroviruses. Viroids and prions are pathogens of slow viral infections. Making a preliminary diagnosis based on a laboratory study. Immunology.	BD	UC	3	LO 2 LO 4 LO 6, LO 9
17	General pathological anatomy	Introduction to pathological anatomy damage and death of cells and tissues metabolic disorders in cells and tissues. Disorders of blood and lymph circulation. Inflammation, general characteristics. Acute inflammation. Exudative inflammation. Immunopathological processes. Regeneration and adaptation processes. Tumors. Introduction to Tumor oncomorphology from Tumor epithelium from tissues derived from mesenchyma, neuroectoderm and melanin-producing tissue.	BD	UC	5	LO 2, LO 6, LO 8
18	General pathological physiology	General etiology and pathogenesis. Pathological reactivity. The role of heredity in pathology. General pathology of the cell. Cell damage. General reactions of the body to damage. Disorders of water-electrolyte metabolism, acid-base state, energy and basal metabolism. Disorders of protein, carbohydrate, and fat metabolism. Hypoxia. Disorders of peripheral blood circulation. Inflammation. Fever. Allergy. Tumors.	BD	UC	5	LO 2, LO 6, LO 8
19	Pathological anatomy of organs and systems	Pathological anatomy of organs and systems in children: - respiratory system - cardiovascular system; - digestive system - genitourinary system - hematopoiesis; - endocrine system; - musculoskeletal system; - the nervous system.	BD	UC	5	LO 2, LO 6, LO 8
20	Pathological physiology of organs and systems	Causes and mechanisms of pathology of organs and systems: - respiratory system, - cardiovascular system, - digestive system, - genitourinary system, - hematopoiesis system, -	BD	UC	5	LO 2, LO 6, LO 8

		endocrine system, - musculoskeletal system, - nervous system.				
21	Physiology	Morphofunctional characteristics of organs and systems: - nervous system, - sensory organs, - cardiovascular, hematopoiesis and immune protection, - endocrine system, - digestive system, - respiratory system, - skin and its derivatives, musculoskeletal system, - urinary system, - reproductive system.	BD	UC	4	LO 2, LO 6, LO 8
22	Biostatistics	Descriptive statistics: frequency distribution, measures of central tendency and spread. Charts. Testing statistical hypotheses. The difference between two sample averages: Student's t-criteria, Mann-Whitney criterion, Wilcoxon criterion. Analysis of variance: F-criterion, Kruskal-Wallis criterion. Conjugacy tables: χ^2 -criterion, Yates correction, McNemar criterion. Correlation analysis: Pearson correlation coefficient, Spearman rank correlation coefficient.	BD	OC	3	LO 2, LO 6, LO 8
23	Introduction to the clinic	Types of medical institutions: early acquaintance, interaction and regular monitoring of diverse patients. The principles of caring for seriously ill patients, performing simple nursing procedures and manipulations, familiarization with the principles of preparation for instrumental research methods.	BD	OC	4	LO 2, LO 3
24	Introduction to speciality	Stages of development of dentistry issues of organization of dental care in Kazakhstan. The main regulatory documents defining the activities of the dental service. Dental clinic — structure and functions. Organization of admission of dental patients. Planning the work of a dentist. Sanitary and hygienic requirements for the organization of dental departments and offices. Disinfection pre-sterilization cleaning and sterilization in dental practice	BD	OC	3	LO 3, LO 5, LO 6, LO 8, LO 10
25	Hygiene and epidemiology	Environment and health. The hygienic value of the air environment. Hygiene of water and water supply and soil. Hygienic principles of planning and development of	BD	OC	4	LO 1, LO 5, LO 7

		populated areas. Food hygiene and human health. Occupational hygiene and occupational physiology. Hygiene of medical institutions. Prevention of VBI. Fundamentals of the organization of sanitary and hygienic measures in wartime.				
26	Molecular biology and medical genetics	Molecular genetic research methods are used to study the structure and functioning of the genetic material of cells (organisms) at the DNA molecule level. The main stages of molecular analysis are: Isolation of the DNA molecule in its pure form; Fragmentation (separation into separate parts) of the DNA molecule; Amplification (obtaining more copies) of DNA fragments;	BD	OC	5	LO 2, LO 10
27	Public health and public health ethics	The main types of medical care. Medical and social aspects of demography. The health of age and gender groups. Calculation and analysis of demographic indicators. Comprehensive assessment of public health. The origins and causes of ethics. The theoretical foundations of ethics. Medical and ethical features of professional communication between doctors and patients at various stages of medical care.	BD	OC	5	LO 6, LO 10
28	Basics of anatomy	General characteristics of tissues, organs, and body systems. Stages of embryogenesis. Anatomical nomenclature. Planes and axes. The components of the musculoskeletal system. Bone structure. The chemical composition and structural unit of the bone. Classification of bones. Types of bone connections. Biomechanics and classification of joints. The structure and classification of muscles. Muscle auxiliaries. Blood supply, venous outflow, innervation. Age, gender and individual characteristics of the musculoskeletal system.	BD	OC	3	LO 2, LO 10
29	Basics of hystology	The history of the development of histology, cytology and embryology. Research methods. Cytology. Human embryology. General histology: Epithelial tissues. Glands. Blood and lymph. Hematopoiesis. Connective tissues.	BD	OC	3	LO 2, LO 10

		Skeletal tissue. Muscle tissue. Nerve tissue.				
30	Basic of scientific research	Resource management. Critical thinking, analytics, analysis, writing and formatting of the article. Structures of scientific works. Quantitative and qualitative methods in science. Proper planning. General and specific requirements for the design of scientific papers. Development of science management methods.	BD	OC	5	LO 2, LO 6, LO 8
31	Basics of physiology	Physiology of excitable tissues. Parameters of excitability. The laws of conducting excitation along nerve fibers. Physiological properties of synapses. Reflex activity of the central nervous system. Features of the spread of excitation in the central nervous system. The processes of inhibition in the central nervous system. Types of GNI. General properties of analyzers. Autonomic synapses, receptors, blockers. Metabolism and energy. Thermoregulation. Myology. Physiological properties of the heart muscle. General characteristics of the endocrine glands. General characteristics of the body's liquid media.	BD	OC	3	LO 2, LO 10
32	Chemistry	Solutions. The composition of bone tissue and saliva. Acid-base balance occurring in the oral cavity. Surface phenomena. Adsorption. The basic principles of qualitative analysis used in the diagnosis and treatment of diseases occurring in the oral cavity. The biological role of organic compounds used in medicine.	BD	OC	3	LO 2, LO 4, LO 7, LO 8, LO 9
33	Educational practice "Safe care"	Formation of skills for effective communication with the patient, high-quality performance of professional duties, organization of self-control in order to continuously improve their activities. The implementation of an individual approach to the patient and the implementation of patient-centered care. Admission and sanitary treatment of patients. Transportation of patients. Nutrition of the patient. Care for the seriously ill.	BD	UC	1	LO1 LO3 LO8 LO9

		Prevention of pressure sores. Change of linen. Sanitary and epidemiological regime of the hospital				
34	Study practice "Clinical practice-1"	Formation of skills of effective communication with the patient and their parents, high-quality performance of professional duties, organization of self-control in order to continuously improve their activities; skills of pre-medical care for patients and organization of work in medical organizations: methods of using medicines, organization of the work of the treatment room, methods of performing injections, blood and urine sampling techniques for laboratory research, preparation of patients for X-ray, instrumental, ultrasound and other research methods.	BD	UC	2	LO2 LO3 LO4 LO8
35	Work practice: "Clinical practice-2"	Acquisition of practical skills in therapeutic, diagnostic manipulations, and care for children's patients. Filling out case histories: collecting information about the history of the disease and life; examination and assessment of the general condition; objective examination of the patient; diagnosis of symptoms, formulation of the preliminary syndrome of diseases of internal organs in children. Formation of skills for effective communication with the patient, high-quality performance of professional duties, organization of self-control in order to continuously improve their activities.	BD	UC	5	LO3 LO4
36	Obstetrics	Organizational and legal issues of the obstetric service for girls and adolescents. Anatomy, morphology and physiology of the reproductive system of girls and adolescents. Physiological obstetrics. Laboratory, functional, radiation, and endoscopic diagnostics in obstetrics. Perinatal aspects of obstetrics. Pathological and operative obstetrics.	SD	UC	5	LO 2, LO 4
37	Childhood Gynecology	Organization of obstetric and gynecological care for children. The main methods of examination in the practice of a pediatric gynecologist. Pathology of the regulation of the reproductive system. Disorders of sexual development.	SD	UC	5	LO 2, LO 4, LO 6, LO 8,

		Inflammatory diseases of the reproductive system in girls. Tumors and tumorous formations of the reproductive system in girls. "Acute abdomen" in gynecological practice. Injuries to the external and internal genitalia.				LO 10
38	Pediatric traumatology and orthopedics	Clinical examination of children with trauma and orthopedic pathology. Damage to the upper limbs and hand. Fractures of the pelvis and spine in children. Injuries to the lower extremities. Congenital deformity of the musculoskeletal system. Systemic diseases of the skeleton and osteochondropathy.	SD	UC	5	LO 1, LO 2, LO 4 LO 7, LO 9
39	Children's Phthisiatry	Definition. Historical background etiology and pathogenesis morphology of primary tuberculosis examination of children and adolescents with tuberculosis methods of detecting tuberculosis in children and adolescents. Tuberculin diagnostics. Specific vaccination of tuberculosis in children and adolescents. Preventive (preventive) treatment. Sanitary prevention of clinical forms of tuberculosis in children and adolescents.	SD	UC	4	LO 2, LO 4, LO 8, LO 10
40	Childhood surgery	Organization of the pediatric surgery service in Kazakhstan. Differential diagnosis and treatment of acute abdominal processes. Differential diagnosis of purulent-inflammatory diseases of childhood. Differential diagnosis of malformations of the gastrointestinal tract, urinary tract and musculoskeletal system.	SD	UC	6	LO 1, LO 2, LO 3, LO 5, LO 6, LO 7, LO 8, LO 9, LO 10
41	Childhood Infectious disease	Rules for hospitalization of children with infectious diseases. Principles of caring for children with infectious diseases. Acute intestinal infections in children. Airborne infections in children. Meningococcal infection. Exanthemic infections in children. Zoonoses in children. Helminthiasis in children. IVBDV (OKI, ORI). Prevention of infectious diseases in	SD	UC	4	LO 1, LO 2, LO 4, LO 7, LO 10

		children.				
42	Infectious disease	General concepts of infectology. Rules for hospitalization of infectious patients. The structure and regime of infectious diseases hospitals. Principles of care for infectious patients. Anthroponoses and zoonoses with fecal-oral, aerosol, contact, transmissive transmission mechanism. Helminthiasis. Particularly dangerous infections. The main syndromes in infectology: clinical and laboratory characteristics. Dispensary observation of the contingents and the risk group.	SD	UC	5	LO 1, LO 2, LO 4, LO 7, LO 10
43	General surgery	Knowledge, understanding of the basic principles of: asepsis and antiseptics, anesthesiology, stopping bleeding, blood loss, determining blood type and Rh factor, blood transfusion, terminal condition, desmurgy, transportation, wounds, electrical trauma, burns, frostbite, operations, surgical infection, sepsis, specific surgical infection, gangrene, fistula, plastic surgery.	SD	UC	4	LO 1, LO 2, LO 4, LO 7, LO 10
44	Oncology and radiology	Modern problems of oncology. The structure of morbidity and mortality of malignant neoplasms. Organization of the oncological service in the Republic of Kazakhstan. Malignant neoplasms: skin, lymph nodes, head and neck, soft tissues and bones, gastrointestinal tract. Cancer of the liver, pancreas. Technical equipment of radiological departments. Modern technologies of radiation therapy. Methods of radiation therapy.	SD	UC	4	LO 2, LO 3, LO 9
45	Basics of internal diseases-1	The field of clinical medicine that studies the etiology, clinical symptoms and syndromes, modern diagnostic and instrumental methods for diagnosing diseases of the respiratory system, blood circulation, digestion, kidneys, principles of emergency care, prognosis and prevention of diseases of internal organs. The program has integration with the following subjects: anatomy, physiology, pathological	SD	UC	5	LO 2, LO 4

		anatomy and pathological physiology, pharmacology.				
46	Basics of internal diseases-2	The field of clinical medicine that studies the etiology, clinical symptoms and syndromes, modern diagnostic and instrumental methods for diagnosing diseases of the blood system, systemic vasculitis, diffuse connective tissue diseases, joint diseases, principles of emergency care, prognosis and prevention of diseases of internal organs. The program has integration with the following subjects: anatomy, physiology, pathological anatomy and pathological physiology, pharmacology.	SD	UC	5	LO 2, LO 3, LO 4, LO 9
47	Basics of childhood diseases in Primary health care	The structure and organization of the children's polyclinic. Preventive work of a pediatrician. Comprehensive assessment of children's health status. Medical monitoring of the health status of newborns and young children. Medical examination of children with chronic diseases. Principles of rehabilitation. Diseases of organs and systems in a polyclinic. Organization of pediatric ambulance and emergency services at the pre-hospital stage.	SD	UC	6	LO 1, LO 4, LO 5, LO 6, LO 7, LO 8, LO 10
48	Basics of childhood diseases-1	Introduction and history of development in pediatrics. The age periods of the child's development. Patterns of growth and development of children. Children's health. Health groups. The concept of diseases by systems. Etiopathogenesis, clinic, diagnosis, course of respiratory disease, cardiovascular system, gastrointestinal tract, hematopoietic system, urinary system, endocrine system.	SD	UC	5	LO 2, LO 3, LO 4, LO 9
49	Basics of childhood diseases-2	Constitutional abnormalities in children. Rickets. Spasmophilia. Vitamin D hypervitaminosis. Deficiency anemia in children. Acute respiratory diseases in children. Diseases of the gastrointestinal tract and liver in children. Kidney diseases in children. Intestinal infections in children.	SD	UC	5	LO 2, LO 3, LO 4, LO 9

50	Basics of pediatric neurology in Primary health care	Anatomical and physiological features of the structure of the nervous system in children. Clinical syndromes of damage to the nervous system and topical diagnosis. The study of the neurological status in children. Etiology, pathogenesis, clinic, diagnosis of neuroinfectious, hereditary neuromuscular diseases, epilepsy of neuroses in children.	SD	UC	4	LO 6, LO 8, LO 9
51	Basics of nutrition	Dietetics. Nutritionology. Trophology. Modern directions of nutrition science. Nutriogenomics. The main research methods in nutrition science. Epigenetics, the role of heredity, constitution and age in the pathology of various age periods. Nutrition, infection, immunity. Probiotics and micronutrients in the nutrition of children. Breastfeeding. Modern ideas about the introduction of complementary foods. The possibilities and prospects of diet therapy.	SD	UC	5	LO 2, LO 3, LO 9, LO 10
52	Basics of surgery diseases	Clinic, diagnosis, differential diagnosis, principles of treatment of surgical diseases in the practice of GP, injuries and congenital deformities of the musculoskeletal system, polytrauma, diseases of bones and joints. Features of the clinic, diagnosis and tactics of treatment of surgical diseases in children.	SD	UC	5	LO 2, LO 4, LO 9
53	Propedeutics of internal diseases	Questioning and detailing the patient's complaints. Collecting information about the history of the disease and life. Inspection and assessment of the general condition. Objective (physical) examination of the patient. Diagnosis of symptoms and formulation of the preliminary syndrome, planning and interpretation of laboratory and instrumental studies. A treatment plan for the main syndromes of diseases of internal organs. Maintaining an educational medical history. Communication skills in teamwork.	SD	UC	5	LO 2, LO 4
54	Propedeutics of childhood diseases-1	Introduction to the propaedeutics of childhood diseases. Periods of childhood. Physical development. Questioning and examination of sick children with diseases of the respiratory, cardiovascular, digestive, hematopoietic, endocrine,	SD	UC	6	LO 2, LO 3, LO 5, LO 9,

		musculoskeletal, nervous systems of different age groups. Methods of physical examination of systems in healthy and sick children. Rules and techniques of palpation, percussion and auscultation of organs of systems in children.				LO 10
55	Propedeutics of childhood diseases-2	Semiotics and the main syndromes of damage to the respiratory, cardiovascular, digestive, hematopoietic, endocrine, musculoskeletal, and nervous systems in children and adolescents. Sexual development of children. The main syndromes of endocrine gland damage. Features of energy, protein, fat, carbohydrate, water-salt metabolism in children, semiotics of disorders.	SD	UC	6	LO 2, LO 3, LO 5, LO 9, LO 10
56	Emergency medical care-1	Loss of consciousness. Respiratory arrest, cardiac arrest. Shock. Convulsions. Chest pain. Paresis and plegias. Psychosis of various etiologies. Multiple injuries and bleeding wounds. Isolated injury (head, neck) with bleeding. Extensive burns and frostbite. Animal and insect bites. Electrical injury. Vomiting with blood. Severe respiratory disorders. Cardiac arrhythmia. Poisoning with toxic substances.	SD	UC	5	LO 1, LO 2, LO 3, LO 4, LO 5, LO 6, LO 7, LO 8, LO 10
57	Emergency medical care-2	Exacerbations of chronic diseases, without obvious signs of life-threatening. Minor injuries. Pain syndrome caused by a chronic disease. Acute urinary retention caused by chronic diseases of the urinary system. Urine with an admixture of blood. Foreign bodies. Conditions requiring medical manipulations in the conditions of primary health care organizations or a hospital.	SD	UC	5	LO 2, LO 3, LO 9
58	Pharmacology - 1	General patterns of pharmacodynamics and pharmacokinetics of medicinal substances. The main groups of medicinal substances, their properties and the mode of administration. Registration of the prescription form. Classification and side effects of medicines.	SD	UC	5	LO 2, LO 3, LO 9

59	Pharmacology - 2	General principles of drug selection in the main clinical syndromes of diseases of the respiratory, cardiovascular, digestive, urinary, endocrine, hematopoietic, nervous and musculoskeletal systems. Indications and contraindications for prescribing medicines from the standpoint of evidence-based medicine.	SD	UC	5	LO 2, LO 3, LO 9
60	Work practice: "Clinical practice-3"	Improvement of professional competencies, acquisition of practical skills necessary for the organization of the medical process, interpretation of the results of laboratory and instrumental studies and clinical diagnosis. Mastering the techniques and techniques of the most important manipulations, skills of providing medical care in emergency situations. Effective communication with patients, their families and medical professionals. Compliance with the principles of child health protection. Documentation.	SD	UC	5	LO2 LO3 LO4 LO5 LO7 LO8 LO10
61	Work practice: "Clinical practice-4"	Formation of skills for organizing the work of a pediatrician in primary health care, the basics of management of a medical outpatient clinic; maintaining accounting and reporting documentation in health information systems. Effective interaction with specialists and patients in solving health problems. Algorithms for rational differential diagnosis, management tactics and dynamic patient monitoring. Diagnosis and provision of emergency and emergency medical care to patients with acute diseases of internal organs at the prehospital stage. Prevention of diseases in children. Communicative competence in extreme situations.	SD	UC	5	LO2 LO3 LO4 LO5 LO7 LO8 LO9 LO10
62	CSHC and medical law	The concept, subject and method of medical law. Sources of medical law. The rights of medical workers in the field of labor relations. The grounds and procedure for bringing medical workers and medical organizations to civil liability. Administrative responsibility of medical workers, medical organizations and executive authorities responsible for health management.	SD	OC	5	LO 3, LO 5, LO 9, LO 10

63	Basics of radiation	Methods of radiation diagnostics (X-ray examination, radionuclide examination, ultrasound examination, computed tomography, magnetic resonance imaging) of internal organs and the osteoarticular system in children. Determination of indications and contraindications. Preparation and placement of patients for radiation research methods.	SD	OC	3	LO 2, LO 3, LO 9
	Final certification				12	