

Ministry of Education and Science of the Kyrgyz Republic

**Approved
by Government decree
Of the Kyrgyz Republic
dated«_15_»September 2015.
order of the Ministry of Education
and Science of the Kyrgyz Republic
No. 1179 of 15.09.2015**

**STATE EDUCATIONAL STANDARD
OF HIGHER PROFESSIONAL EDUCATION**

DIRECTION: General Medicine

Academic degree: *Specialist (Doctor)*

Bishkek 2015

This standard in the direction **560001 General medicine** is developed by the Educational and Methodological Association for Higher Medical and Pharmaceutical education in the field of healthcare under the Ministry of Education and Science of the Kyrgyz Republic at the basic university I. K. Akhunbayev Kyrgyz State Medical Academy.

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1. GENERAL PROVISIONS

1.1. This State Educational Standard for the specialty of higher professional education was developed by the Ministry of Education and Science of the Kyrgyz Republic in accordance with the Law "On Education" and other regulatory legal acts of the Kyrgyz Republic in the field of education and approved in accordance with the procedure established by the Government of the Kyrgyz Republic.

Implementation of this State Educational Standard is mandatory for all higher education institutions that implement professional educational programs for training specialists, regardless of their organizational and legal forms.

1.2. **Terms and definitions** (specify the main terms and definitions used in this State Educational Standard of Higher Professional Education)

This State Educational Standard of Higher Professional Education uses terms and definitions in accordance with the Law of the Kyrgyz Republic "On Education" and international documents in the field of higher professional education adopted by the Kyrgyz Republic in accordance with the established procedure.:

- **the main educational program** is a set of educational and methodological documentation that regulates the goals, expected results, content and organization of the implementation of the educational process in this area of training (specialty) of higher professional education;
- **training area** - a set of educational programs for training personnel with higher professional education (specialists) of various profiles, integrated on the basis of the commonality of fundamental training;
- **profile** - focus of the main educational program on a specific type and (or) object of professional activity;
- **cycle of disciplines** - a part of the educational program or a set of academic disciplines that has a certain logical completeness in relation to the established goals and results of training, education;
- **module** - a part of an academic discipline that has a certain logical completeness in relation to the established goals and results of training, upbringing;
- **competence** - a dynamic combination of personal qualities, knowledge, skills and abilities required for professional activity in the specialty **560001 General Medicine**;
- **credit (credit unit)** - a conditional measure of the labor intensity of the main professional educational program;
- **learning outcomes** - competencies acquired as a result of training in the main educational program / module.

1.3. **Abbreviations and designations** (indicate the main abbreviations used in this State Educational Standard of Higher Professional Education).

The following abbreviations are used in this State Educational Standard.:

- SES** - State Educational standard;
- HPE** - higher professional education;
- MEP**- the main educational program;
- EMD** - educational and methodical associations;
- CD MEP**-cycle of disciplines of the main educational program;
- GC** - General scientific competencies;

IC-instrumental competencies;
PC - professional competencies;
SPC - social, personal and general cultural competencies.

2. APPLYING AREA

2.1. The present State educational standard of higher professional education (hereinafter - GOS VPO) is a set of norms, rules and requirements that are mandatory in the implementation of the basic educational programs of training of specialists in direction (degree) **560001 General Medicine** educational organizations of higher education, licensed by, the state accreditation (certification) (higher education institutions, universities), on the territory of the Kyrgyz Republic.

2.2. The main users of this State Educational Standard of Higher Professional Education in the specialty **560001 General Medicine** are:

- the administration and scientific and pedagogical (faculty, research staff) staff of higher education institutions responsible for the development, effective implementation and updating of basic professional educational programs, taking into account the achievements of science, technology and the social sphere in this area and level of training;
- students who are responsible for the effective implementation of their educational activities for the development of the main educational program of the university in this area of training;
- associations of specialists and employers in the relevant field professional activity;
- educational and methodological associations and councils that ensure the development of basic educational programs on behalf of the central state executive authority in the field of education of the Kyrgyz Republic;
- state executive authorities, providing and financing of higher professional education;
- authorized state executive that monitor compliance with legislation in the system of higher professional education, carry out certification, accreditation and quality control in the field of higher professional education.

2.3. Requirements for the level of preparation of applicants.

2.3.1. The level of education of an applicant applying for higher professional education with the qualification "specialist" - general secondary education or secondary professional (or higher professional) education.

2.3.2. The applicant must have a state-issued document on general secondary education or secondary professional (or higher professional) education.

3. GENERAL CHARACTERISTICS OF THE SPECIALTY

3.1. In the Kyrgyz Republic, the State Higher Professional Education System is implemented in the specialty **560001 General Medicine**. Upon mastering the MEP of higher professional

education and successfully passing the state final certification, a diploma of higher professional education with the qualification «Doctor» is issued in accordance with the established procedure.

A graduate of the specialty **560001 Medical Science** must be ready for postgraduate education in clinical disciplines. He has the right to hold medical positions that are not related to independent management of patients, as well as to engage in research and pedagogical (trainee teacher) activities in theoretical and fundamental areas of medicine.

3.2. The standard term for mastering the MEP of higher professional education in the specialty "Doctor" **560001 Medical business** on the basis of secondary general or secondary/higher professional education only for full-time training is 6 years.

3.3. The total labor intensity of mastering MEP is 360 credits (credits). The labor intensity of the MAP HPE for the academic year is equal to 60 credits (credit units). The labor intensity of one semester is equal to 30 credits (credits) for a two-semester construction of the educational process. One credit (credit unit) is equivalent to 30 hours of student's academic work (including classroom work, independent work, and all types of attestation).

3.4. Objectives of the MEP HPE in the specialty **560001 General Medicine** in the field of training and education of the individual.

3.4.1. The goal in the field of training is:

training of a doctor who has general and special competencies, universal and subject-specific competencies that contribute to his social mobility and stability in the labor market, readiness for postgraduate training with subsequent professional medical activity in the chosen field.

3.4.2. The goal in the field of personal education is:

developing students' sense of purpose, organization, hard work, responsibility, citizenship, communication skills, tolerance, and improving the overall culture.

3.5. Field of professional activity of graduates in the specialty **560001**

General Medicine includes a set of technologies, means, methods and methods of human activity aimed at preserving and improving the health of the population by ensuring the proper quality of medical care (therapeutic and preventive, medical and social).

3.6. The objects of professional activity of graduates in the specialty **560001 General Medicine** are:

- children and adolescents under 18 years of age
- adult population over the age of 18
- a set of tools and technologies aimed at creating conditions for maintaining health, ensuring the prevention, diagnosis and treatment of diseases.

3.7. Types of professional activities of graduates:

- preventive service;
- diagnostic system;
- therapeutic area;
- rehabilitation program;
- educational program;

- organizational and managerial support;
- scientific and research organization.

3.8. Tasks of professional activity of graduates in the specialty **560001 General Medicine**

Preventive activities:

- implementation of measures aimed at improving the health of children, adolescents and adults;
- prevention of diseases among children, adolescents and adults;
- formation of motivation among adults and children to preserve and promote health;
- implementation of preventive and anti-epidemic measures aimed at preventing the occurrence of diseases;
- implementation of dispensary monitoring of the adult population, adolescents and children;
- carrying out sanitary and educational work among adults, children, their relatives and medical personnel in order to form a healthy lifestyle.

Diagnostic activity type:

- diagnostics of diseases and pathological conditions in children, adolescents and adults based on proficiency in propaedeutic and laboratory-instrumental research methods;
- diagnosis of emergency conditions in children, adolescents, and adults; diagnosis of pregnancy.

Therapeutic activity:

- treatment of adults, adolescents and children with the use of therapeutic and surgical methods;
- management of physiological and pathological pregnancy;
- providing medical care to adults, adolescents and children in emergency situations;
- carrying out medical evacuation measures in an emergency situation and providing medical assistance to the population in extreme conditions of epidemics, in foci of mass destruction;
- organization of work with medicines and compliance with the rules of their use and storage.

Rehabilitation type of activity:

- carrying out rehabilitation activities among adults, adolescents and children who have suffered a somatic disease, trauma or surgery;
- use of physical therapy, physiotherapy, and resort factors in adults, adolescents, and children who need rehabilitation for preventive purposes.

Educational activity type:

- formation of positive medical behavior in the adult population, adolescents and children aimed at maintaining and improving the level of health;
- formation of motivation for a healthy lifestyle in the adult population, adolescents and children, including the elimination of bad habits that adversely affect the health of the younger generation;
- training of the adult population, adolescents and children in the main health-improving activities that contribute to the prevention of diseases and health promotion.

Organizational and managerial type of activity:

- knowledge of the healthcare organization system and patient referral system;
- maintaining medical records in the hospital;
- compliance with the quality of medical diagnostic and rehabilitation-and-prophylactic care for adults and children
- conducting business correspondence (service notes, memos, letters, etc.).

Research type of activity:

- analysis of scientific literature and official statistical reviews;
- preparation of reports on the specialty;
- participation in statistical analysis and preparation of a report on the completed study.

4. GENERAL REQUIREMENTS FOR MEP IMPLEMENTATION CONDITIONS

4.1. General requirements for the rights and obligations of the university in the implementation of the MEP.

4.1.1. Universities independently develop a MEP based on the relevant SES of the Kyrgyz Republic, taking into account the needs of the labor market.

Universities are required to annually update the MEP taking into account the development of science, culture, economy, technology, technology and social sphere, adhering to the recommendations on ensuring the quality of education in the university, which include:

- in developing a strategy to ensure the quality of graduate training;
- in monitoring and periodic review of educational programs;

- in developing objective procedures for assessing the level of knowledge and skills of students, graduates ' competencies based on clear agreed criteria;
- in ensuring the quality and competence of the teaching staff;
- providing sufficient resources for all implemented educational programs, monitoring the effectiveness of their use, including by interviewing students;
- regularly conduct self-assessment according to agreed criteria to evaluate their activities (strategy) and compare them with other educational institutions;
- in informing the public about the results of their activities, plans, and innovations.

4.1.2. Assessment of the quality of training of students and graduates should include their current, intermediate and final state certification. To certify students and graduates for compliance of their personal achievements with the stage-by-stage or final requirements of the relevant MEP, databases of assessment tools are created, including standard tasks, test papers, tests, etc., which allow assessing knowledge, skills and the level of acquired competencies. Databases of assessment tools are developed and approved by the university.

Requirements for the content and structure of final qualification works are determined by the university on the basis of the Regulations on the final state certification of university graduates.

4.1.3. When developing a MEP, the university's capabilities in forming social and personal competencies of graduates (for example, competencies of social interaction, self-organization and self-government, of a system-active nature) should be determined. The university is obliged to form the socio-cultural environment of the university, to create the conditions necessary for the comprehensive development of the individual.

The university is obliged to promote the development of the social and educational component of the educational process, including the development of student self-government, student participation in public organizations, sports and creative clubs, and scientific student societies.

4.1.4. The MEP of higher education institutions must contain disciplines of the student's choice in the amount of at least one third of the variable part of each CD. The Academic Council of the University sets the procedure for the formation of disciplines of elective courses.

4.1.5. The university is obliged to provide students with a real opportunity to participate in the formation of its training program.

4.1.6. The university is obliged to acquaint students with their rights and obligations in the formation of the MEP, explain that the disciplines chosen by students become mandatory for them, and their total labor intensity should not be less than it is provided for in the curriculum.

4.2. General requirements to the rights and obligations of the student in the implementation of the MEP.

4.2.1. Students have the right (obligation) to choose specific subjects within the limits of the amount of study time allocated for mastering the academic disciplines of the elective courses provided for by the MEP.

4.2.2. When forming their individual educational trajectory, the student has the right to receive advice at the university on the choice of disciplines and their impact on the future training profile (specialization).

4.2.3. In order to achieve results in mastering the MEP in terms of SPC development, students are required to participate in the development of student self-government, the work of public organizations, sports and creative clubs, and scientific student societies.

4.2.4. Students are required to complete all tasks provided for in the University's MEP within the established time frame.

4.3. The maximum amount of a student's academic workload is set at 45 hours per week, including all types of classroom and extracurricular (independent) academic work.

The volume of classroom sessions per week for full-time education is determined by the State Budget, taking into account the level of higher professional education and the specifics of the training area in the professional block within 70%, in the humanitarian, social and economic block, and in the mathematical and natural science blocks within 50% of the total volume allocated for the study of each academic discipline.

4.4. The total amount of vacation time in the academic year should be 7-10 weeks, including at least two weeks in winter.

5. REQUIREMENTS FOR MEP BY SPECIALTY

5.1. Requirements for the results of mastering MEP in the specialty.

A graduate of the specialty **560001 General Medicine** with the qualification of a specialist «Doctor» in accordance with the goals of the MEP and the tasks of professional activity specified in clauses 3.4 and 3.8 of this State Higher Professional Education Standard must have the following competencies: :

a) universal:

5.1.1. General scientific competencies (GC)

GC-1 - is able to analyze socially significant problems and processes, use in practice the methods of the humanities, natural sciences, biomedical and clinical sciences in various types of professional and social activities;

GC-2-is able to analyze worldview, socially and personally significant problems, basic philosophical categories, and self-improvement;

GC-3 - is able to analyze significant political events and trends, to master the basic concepts and laws of the world historical process, to respect and respect the historical heritage and traditions, to possess knowledge of historical and medical terminology;

GC-4 - able to analyze economic problems and social processes, use methods of economic relations in the healthcare system;

GC-5-is capable of logical and reasoned analysis, public speech, discussion and polemics, implementation of educational activities, cooperation and conflict resolution; tolerance;

GC-6 - is able and ready to learn one of the foreign languages at the level of everyday communication, to written and oral communication in the state language and official languages; GC-7-is able to use management methods; organize the work of the team, find and make responsible management decisions within their professional competence;

GC-8-is able to carry out its activities taking into account the moral and legal norms accepted in the society; comply with the rules of medical ethics, laws and regulations on working with confidential information; maintain medical secrecy.

5.1.2. Instrumental competencies (IC)

IC-1 - ability to work independently on a computer (basic skills);

IC-2-ready for written and oral communication in the state language and official languages, able to master one of the foreign languages at the level of everyday communication;

IC-3-is able to use management methods; organize the work of performers; find and make responsible management decisions in various conditions, opinions and within the scope of their professional competence;

IC-4-readiness to work with information from various sources.

5.1.3. Social, personal and general cultural competencies (SPC)

SPC-1-is able to implement ethical and deontological aspects of medical activity in communication with colleagues, nurses and junior staff, adults and children;

SPC -2-is able and ready to identify the natural science nature of problems that arise in the course of a doctor's professional activity;

SPC-3-capable of analyzing medical information based on the principles of evidence-based medicine;

SPC-4-is able to apply modern social and hygienic methods of collecting and medico-statistical analysis of information on the health indicators of the child population;

SPC-5-is able to use methods for assessing natural (including geographic) and medico-social environmental factors in the development of diseases in children and adolescents, and to correct them;

b) professional (PC):

5.1.4. Professional competencies

PC-1-is able to analyze the results of its own activities to prevent medical errors, while being aware of disciplinary, administrative, civil, and criminal liability;

- PC-2 - is able and ready to conduct and interpret a survey, physical examination, clinical examination, the results of modern laboratory and instrumental studies, write a medical record of outpatient and inpatient patients of adults and children;
- PC-3-is able to conduct pathophysiological analysis of clinical syndromes, justify pathogenetically justified methods (principles) of diagnosis, treatment, rehabilitation and prevention among adults and children, taking into account their age and gender groups;
- PC-4-is able to apply aseptic and antiseptic methods, use medical instruments, and master the technique of caring for sick adults and children;
- PC-5 - capable of working with medical and technical equipment used in working with patients, own computer equipment, receive information from various sources, work with information in global computer networks, apply the capabilities of modern information technologies to solve professional problems;
- PC-6-is able to apply new information on population health indicators at the level of health facilities;

5.1.5. Preventive activities

- PC-7 - carry out preventive measures to prevent infectious, parasitic and non-communicable diseases, conduct sanitary and educational work on hygiene issues;
- PC-8-is able to carry out preventive measures with the attached population to prevent the occurrence of the most common diseases, carry out general health measures to form a healthy lifestyle, taking into account risk factors, and make recommendations on healthy nutrition;
- PC-9-is able to select individuals for observation, taking into account the results of mass tuberculosis diagnostics and fluorographic examination, and evaluate its results for early detection of tuberculosis;
- PC-10-capable of carrying out anti-epidemic measures, protecting the population in hotbeds of particularly dangerous infections, in case of deterioration of the radiation situation and natural disasters;

5.1.6. Diagnostic activities

- PC-11-capable and ready to make a diagnosis based on the results of biochemical and clinical studies, taking into account the course of pathology in organs, systems and the body as a whole;
- PC-12 is able to analyze the patterns of functioning of individual organs and systems, use knowledge of anatomical and physiological features, basic methods of clinical and laboratory examination and assessment of the functional state of the body of an adult and children, for timely diagnosis of diseases and pathological processes;
- PC-13-is able to identify the main pathological symptoms and syndromes of diseases in patients, using knowledge of the basics of medical, biological and clinical disciplines, taking into account the course of pathology in organs and systems of the body as a whole,

analyze the patterns of functioning of organs and systems in various diseases and pathological processes, use the algorithm for making a diagnosis (main, concomitant, complications), perform basic diagnostic measures to identify urgent and life-threatening conditions;

5.1.7. Therapeutic activities

PC-14-able to perform basic treatment measures for the most common diseases and conditions in adults and children;

PC-15-is able to prescribe adequate treatment to patients in accordance with the diagnosis;

PC-16-is able to provide first aid to the adult population and children in case of emergency and life-threatening conditions, send patients to hospital in a planned and urgent manner;

PC-17-is able to prescribe adequate treatment to patients in accordance with the diagnosis;

PC-18-is able to provide first aid to the adult population and children in case of emergency and life-threatening conditions, send patients to the hospital in a planned and urgent manner;

5.1.8. Rehabilitation activities

PC-19 - is able and ready to apply rehabilitation measures (medical, social and professional) among adults and children with the most common pathological conditions and injuries of the body;

PC-20-is able to give recommendations on the choice of treatment regimen, determine indications and contraindications for the appointment of physical therapy, physiotherapy, non-drug therapy, use the main resort factors in the treatment of adults and children;

5.1.9. Educational activities

PC-21-capable of teaching secondary and junior medical personnel and patients the rules of sanitary and hygienic regime, ethical and deontological principles;

PC-22-capable of teaching adults and children the rules of medical behavior; to conduct hygiene procedures, to develop healthy lifestyle skills;

5.1.10. Organizational and managerial activities

PC-23-is able to use the regulatory documentation adopted in healthcare of the Kyrgyz Republic;

PC-24-is able to use knowledge of the organizational structure and healthcare organizations. Referral and redirection system;

PC-25-is able to provide a rational work organization of secondary and medical institutions junior medical personnel;

PC-26 – must know the main issues of examination of working capacity (temporary) among the population, carry out prevention of disability among adults and children;

5.1.11. Research activities

PC-27-ready to study scientific and medical information, local and foreign experience on the subject of research;

5.2. Requirements for the MEP structure in the specialty.

MEP in the specialty **560001 General Medicine** provides for the study of the following training cycles:

- C. 1-the humanitarian, social and economic cycle;
- C.2-mathematical and natural science cycle;
- C. 3-professional cycle;

and sections:

- C. 4-additional types of training;
- C. 5-practice.

Requirements for the structure of basic educational programs for training specialists in the direction 560001 General Medicine

Codes	Training cycles and projected results of their development	Labor intensity (credits)	List of disciplines for the development of sample programs, textbooks and training manuals	Codes required competencies
C.1	Humanitarian, social and economic cycle	36		
	<i>Basic part</i>	30		

	<p>As a result of studying the basic part of the cycle, the student should know:</p> <p>4000 words of general and terminological character, lexical minimum in the number of phrases. Lexical difference by usage (household, terminological, service, etc.).</p> <p>Lexical minimum in the amount of 4000 educational lexical units of general and terminological nature. The concept of differentiation of vocabulary by areas of application (household, medical, terminological, general scientific, official, etc.). Basic medical and pharmaceutical terminology in Latin;</p> <p>Study of the Latin language, basic medical terminology, prescription.</p> <p>Historians about the ethnonym "Kyrgyz". Three main directions in studying the problem of the origin and formation of the Kyrgyz people. The history of Kyrgyzstan is an integral part of world history. History of medicine. The main stages of the development of medicine.</p> <p>Freedom and responsibility. Morality, justice, and law. Moral values. The idea of a perfect person in different cultures. Aesthetic values and their role. Meaning of human existence, freedom of conscience. Consciousness and cognition. Consciousness, self-awareness and personality. Cognition, creativity, and practice. Faith and knowledge. Understanding and explanation. Rational and irrational in cognitive activity. The problem of truth. lives.</p> <p>An introduction to the science of Manas. The epic "Manas" is one of the brightest examples of world culture. Epic "Manas" is a source of national ideology. Adoption of the law of the Kyrgyz Republic on the epic "Manas", its historical significance.</p> <p>Be able to:</p> <p>Reading. Understanding of texts on household and household affairs and related to the profession. Read and understand simplified artistic text. Writing, dictation, presentation, short essay, message, writing, biography, etc.</p>	<p>12</p> <p>8</p> <p>4</p> <p>4</p> <p>2</p>	<p>Kyrgyz (Russian) language</p> <p>Foreign language, Latin language</p> <p>Kyrgyz history, history of medicine</p> <p>Philosophy</p> <p>Manas Studies</p>	<p>Manas Studies GC-1</p> <p>GC-2</p> <p>GC-3 GC-4</p> <p>GC-5</p> <p>GC-6</p> <p>GC-7</p> <p>GC-8</p> <p>IC-2</p>
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Speaking. Dialogical and monologue speech using the most common and relatively simple lexical and grammatical means in the main communicative situations of informal and official communication. Fundamentals of public speech (oral communication, report).

Listening skills. Understanding dialogic and monologue speech in the field of everyday and professional communication. Reading. Types of texts: simple pragmatic texts and texts on a wide and narrow specialty profile. Navigate the history of the Kyrgyz Republic from the earliest period to modern Kyrgyzstan.

Methods and techniques of philosophical analysis of problems; forms and methods of scientific knowledge, their evolution. Basic laws and trends in the development of the world historical process;

Manasology: the canonical plot of the epics "Manas", "Semetey", "Seytek". His lofty human ideals: motherland, the struggle for one's freedom, the unity of the people, friendship based on justice, the interests of the Fatherland, the highest interests of the people, a sacred duty to the Fatherland, the struggle for honor, honor, respect for the traditions of ancestors, humanity, tolerance, recognition of black and white.

To master:

Basics of public speech (oral communication, report).

Understanding dialogic and monologue speech in the field of everyday and professional communication. The main stages of the formation of the Kyrgyz Republic. Skills of presenting an independent point of view, analysis and logical thinking, public speech, moral and ethical argumentation, conducting discussions and round tables, a foreign language to the extent necessary to be able to obtain information from foreign sources. Skills in reading and writing clinical and pharmaceutical terms in Latin and have an understanding of the diversity of forms of human knowledge, the relationship between truth and error, knowledge and faith, rational and irrational in human life, the peculiarities of the functioning of knowledge in modern society, spiritual values, their significance in creativity and everyday life;

Understand the role of science in the development of civilization, in the interaction of science and technology, and have an understanding of modern social and ethical issues related to them, understand the value of scientific rationality and its historical types, know the structure, forms and methods of scientific knowledge, and their evolution;

Navigate the history of the Kyrgyz Republic from the earliest period to modern Kyrgyzstan.

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	Methods and techniques of philosophical analysis of problems; forms and methods of scientific knowledge, their evolution. Main patterns and trends in the development of the world historical process; Manastaanuu "Manas", "Semetey", "Seitek" story.			
	<i>Variable part, including disciplines offered by the university</i>	6		
C. 2	Mathematical and natural science cycle	21		
	<i>Basic part</i>	15		

	<p>A study of the basic part of the cycle, the student should know:</p> <ul style="list-style-type: none"> • the axiomatic method, the basic mathematical structures, probability and statistics, mathematical models, algorithms, and programming languages, the standard software professional activities, basic concepts and methods of information protection, computer workshop; • the concept of information, the common characteristics of the processes of collection, transmission, processing, and accumulation of information; technical and software implementation of information processes; models of solutions to functional and computational problems; algorithm and programming languages high-level programming; databases; software and technology programming; local and global computer networks; fundamentals of protection of information constituting a state secret; protection of information; computer workshop. • physical properties of mechanics; vibrations and waves; molecular physics and thermodynamics; electricity and magnetism; optics; atomic and nuclear physics; solid state physics; physics workshop; basic physical phenomena and laws underlying the processes occurring in the human body; physical foundations of the functioning of medical equipment; 	<p>6 5 4</p>	<p>Mathematics and Computer Science Physics Chemistry</p>	<p>IC-1 IC-3 IC-4 SPC-2 SPC-3 SPC-5</p>
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	<p>As a result of studying the basic part of the cycle, the student should be able to:</p> <ul style="list-style-type: none"> • use educational, scientific, popular literature, and the use the internet for professional activities; • use physical, chemical and biological equipment; work with magnifying equipment (microscopes, optical and simple magnifiers); • perform statistical processing of experimental data; • palpate the main bone landmarks on a person, draw topographic contours of organs and main vascular and nerve trunks. • to analyze concerning histophysiologic assessment of various cell, tissue and organ structures in patients; • chemical system: solutions, disperse systems, electrochemical systems, catalysts and catalytic systems, polymers and oligomers; chemical thermodynamics and kinetics: energy in chemical processes, chemical and phase equilibrium, reaction speed and methods of its regulation of oscillatory reaction; reactivity substances: chemistry and the periodic system of elements, redox properties of substances, chemical bond, complementarity; the chemical identity: a qualitative and quantitative analysis, analytical signal, chemical, chemical and physical analysis, chemical workshop; chemical and biological essence of the processes occurring in a living human body at the molecular and cellular levels. 			
	<i>Variable part, including subjects of students ' choice offered by the university</i>	6		
C. 3	Professional cycle	287		
	<i>Basic part</i>	200		

	<p>As a result of studying the basic part of the professional cycle, the student should know:</p> <ul style="list-style-type: none"> • living systems, human physiology and ecology, ecology and nature protection. Biology and ecology workshop. • structure and biochemical properties of the main classes of biologically important compounds, the main metabolic pathways of their transformation; 	<p>6</p> <p>7</p>	<p>Medical Biology, Genetics, Parasitology</p> <p>General and Clinical Biochemistry</p>	<p>PC-1</p> <p>PC-2</p> <p>PC-3</p> <p>PC-4</p> <p>PC-5</p>
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	<ul style="list-style-type: none"> • the role of cell membranes and their transport systems in metabolism in the human body; chemical and biological essence of the processes occurring in the living organism of the child, teenager and adult at the molecular and cellular levels; • the classification, morphology and physiology of microorganisms and viruses and their impact on the health of the population, methods of microbiological diagnostics; using the main antibacterial, antiviral, and biological products; • the main regularities of the development and functioning of the body of an adult, child and adolescent based on the structural organization of cells, tissues and organs; • histogenetically features of tissue elements; methods of research; • anatomical and physiological, age-sexual and individual features of the structure and development of a healthy and sick person; • concepts of etiology, pathogenesis, morphogenesis, variability of the disease in the adult and the teenager, the principles of classification of diseases; basic concepts of General nosology; • functional systems of the human body their regulation and self-regulation when exposed to the external environment in normal and pathological processes; the structure and function of the immune system in adult and adolescent her age characteristics, mechanisms of development and function, the basic methods of immunoassay methods for assessing the immune status and clinical use of immunotropic therapy; • basic legislation of the CU, the basic normative instruments for the protection of public health; • basics of health insurance in the Kyrgyz Republic, the structure of the system of healthcare; the basics of preventive medicine aimed at improving the health of the population of different age and gender and social groups; • sanitary and hygienic requirements for design, 	<p>9</p> <p>8</p> <p>9</p> <p>9</p> <p>10</p> <p>9</p> <p>10</p> <p>10</p> <p>10</p>	<p>Normal and clinical anatomy</p> <p>Histology, Embryology, and cytology</p> <p>Normal physiology</p> <p>Microbiology, Virology and Immunology</p> <p>Basic and clinical pharmacology</p> <p>Pathological anatomy, clinical pathological anatomy</p> <p>Pathological Physiology, clinical pathological Physiology</p> <p>Internal diseases, radiation diagnostics</p> <p>Internal diseases 2</p> <p>Internal diseases 3</p>	<p>SPC-6</p> <p>SPC -7</p> <p>SPC -8</p> <p>SPC -9</p> <p>SPC -11</p> <p>SPC -12</p> <p>SPC -13</p> <p>SPC -14</p> <p>SPC -15</p> <p>SPC -16</p> <p>SPC -17</p> <p>SPC -18</p> <p>SPC -19</p> <p>SPC -20</p> <p>SPC -26</p> <p>SPC -27</p>
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	organization and mode of operation of the organizations of health care;	10	Internal diseases 4	
		10	Internal diseases 5	

<ul style="list-style-type: none"> • basis for the organization of outpatient and inpatient care for children, adolescents and adult population, modern organizational forms of work and diagnostic capabilities of outpatient services; • principles of dispensary observation of different age and gender and social groups, rehabilitation patients; • classification and main characteristics of drugs, pharmacodynamics and pharmacokinetics, indications and contraindications to the use of drugs; side effects; • General principles for the design of the recipes and preparation drugs by prescription; • the implementation of specific and non-specific prevention of infectious diseases in adults and adolescents; • features of the organization and the main aim of the activities of a General practitioner; • methods of implementation of urgent actions and indications for hospitalization of patients of different ages; • maintenance of standard accounting and reporting of medical records in medical institutions of the public health; • the epidemiology of infectious, parasitic and noninfectious diseases in adults and children, the implementation of anti-epidemic measures, the protection of the population in the foci of especially dangerous infections, the deterioration of the radiation situation and natural disasters; • the etiology, pathogenesis, diagnosis, treatment and prevention of the most common diseases among the population; • the clinical picture, features of the course and possible complications of the most common diseases that occur in the typical form in children, adolescents and adults; • the main clinical manifestations in adults and children diseases of the skin and subcutaneous tissue, respiratory tract, eye and adnexa, nervous system, maxillofacial region, cancer pathology, 	10	Children's diseases, radiation diagnostics	
	10	Children's diseases 2	
	10	Children's diseases 3	
	10	Surgical diseases, radiation diagnostics	
	10	Surgical diseases 2	
	10	Obstetrics and Gynecology	
	10	Obstetrics and Gynecology 2	
	4	Anesthesiology, intensive care, emergency situations	

	<p>the features of their diagnosis and monitoring;</p> <ul style="list-style-type: none"> • clinical manifestations of the major syndrome requiring surgical treatment in the FMC (family medicine center); • features provide medical care to adults and adolescents in case of emergency; • modern methods of clinical, laboratory and instrumental diagnostics of patients with medical, surgical and infectious profiles in terms of FMC; • General principles and peculiarities of diagnostics of hereditary diseases and congenital anomalies; • the organization and carrying out rehabilitation activities among adolescents and adults, the indications and contraindications to their destination in terms of FMC; • types and methods of modern anesthesia (mask, endotracheal, intravenously) in children and adolescents; • the ways and methods of prevention of postoperative complications in terms of FMC; • features of intensive care in patients of different age and sex groups; • features of the organization of medical care, resuscitation in adults, adolescents and children in situations of emergency, disaster in peacetime and wartime; • the principles and methods of medical and emergencies in adults, children, and adolescents; • the organization of obstetric and gynecological care, diagnosis and maintenance of pregnancy, diagnosis, treatment and rehabilitation of women with gynecological diseases; • collection of pathological material from the patient; precautions, special clothing; • basic principles of diagnostics, treatment and rehabilitation of infectious diseases in the adult population and adolescents, the indications for hospitalization of patients with infectious diseases; • common knowledge at the mass diagnosis of tuberculosis among the population, the selection of patients for observation; • features of diagnosis, treatment and rehabilitation of patients; • clinical and pharmacological characteristics of the main 			
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	groups of drugs and rational choice of a specific drug			
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means for treatment of major pathological syndromes, diseases and emergency patients;

- the system of organization of production of forensic medical examination in Kyrgyz Republic; rights, duties and responsibility of a doctor;

be able:

- to palpate of human basic bony landmarks, to describe the topographic contours of the bodies and major vascular and nerve trunks;
- to analyze concerning histophysiological assessment of various cell, tissue and organ structures in patients;
- to analyze the results of x-ray examination of patients;
- to interpret the results of the most common methods of laboratory and functional diagnostics thermometry for the detection of pathological processes in the organs and systems of the person;
- to justify the nature of the pathological process and its clinical manifestations and the principles of pathogenetic therapy of the most common diseases;
- to justify the need for clinical and immunological examination of the patient, an adult and a teenager, to analyze the effect of drugs on the totality of their pharmacological properties and their potential use for therapeutic treatment of patients of different ages;
- to prescribe medications for certain diseases and pathological processes in patients, based on the characteristics of their pharmacodynamics and pharmacokinetics;
- on the basis of a visual inspection and documentation to give an opinion on the cause of death; to complete a medical certificate of death;
- to analyze the quality of medical care, the health status of children and adults, the influence factors of the way of life, the environment and the organization of medical care;
- participate in the organization and provision of medical and sanitary-epidemiological, preventive and rehabilitative care for adolescents and adult population taking into account social place and age-sex structure;
- to collect the anamnesis; to conduct a survey of the

	patient and his relatives, to conduct a physical examination			
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	<p>examination of the patient of different age (inspection, palpation, auscultation, measurement of blood pressure, determination of characteristics of heart rate, breath rate, etc.),</p> <ul style="list-style-type: none">• to send to laboratory and instrumental examination, a consultation with a specialist;• to interpret the results of the survey, put the patient's preliminary diagnosis, to identify the amount of additional research to clarify the diagnosis; to formulate a clinical diagnosis;• to develop a sick person treatment plan with consideration of the disease, to select and prescribe drug therapy, the use of non-pharmacological methods of treatment, to carry out rehabilitation activities;• to identify life-threatening violations and to provide in case of emergency first aid to the population, the victim in the lesions in emergency situations• to spend with the patients and their relatives preventive measures to increase the body's resistance to adverse factors of the external environment using various methods of hardening; to promote a healthy lifestyle;• maintain medical records of a different nature in outpatient and inpatient facilities; <p>to master:</p> <ul style="list-style-type: none">• methods of conducting medical accounting and reporting documentation in the medical institutions of the health system;• general methods of clinical examination of patients,• interpretation of results of laboratory and instrumental methods of diagnosis from patients;• algorithm preliminary diagnosis to the patients and then sending them for further examination and medical professionals; the algorithm performances deployed clinical diagnosis;• the algorithm performs basic medical diagnostic and therapeutic measures to provide first medical aid to the population in emergency and life-threatening conditions			
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	<i>Variable part, including the subjects of students ' choice offered by the university</i>	87		
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C. 4	Additional types of training	1100h.		
	<p>As a result of studying the cycle, the student should know:</p> <ul style="list-style-type: none"> the social role of physical culture in personal development and preparation for professional activity; the principles of a healthy lifestyle. <p>be able to:</p> <ul style="list-style-type: none"> understand the issues of physical culture used for prevention and treatment. Training of students as reserve medical service officers who know the basic protocols of army and combat regulations of the Armed Forces <p>be able to:</p> <ul style="list-style-type: none"> apply the requirements of the combined arms and combat regulations of the Armed Forces in the performance of official duties to assess the tactical and rear situation in the interests of medical support for units, divisions in combat military medical service - training of reserve medical service officers. 	400	Physical culture	
		700	Military medical training	
C. 5	Internship	16		

<ul style="list-style-type: none"> • Study of the work of junior medical personnel and performing manipulations for patient care. • Study of the work and performance of manipulations of a ward nurse. • Studying the work of a procedural nurse and performing manipulations and procedures of secondary medical personnel. <p>The student should know:</p> <ul style="list-style-type: none"> • types of sanitary treatment of patients; • features of observation and care of patients with diseases of various body systems. <p>The student should be able to</p> <ul style="list-style-type: none"> • produce the sanitary treatment of the patient at admission and during hospital stay, change of underwear and bed linen of the patient, treating bedsores; • to care for patients of all ages, suffering from diseases of various organs and systems • to transport the sick; • to measure the body temperature, daily diuresis, to collect biological material for laboratory tests, for kids and teenagers anthropometry, different types of enemas; 	1	Assistant to Junior medical staff	SPC-1
	1	Care for children with somatic and surgical diseases	
	2	Assistant Nurse	PC-25
	2	Assistant paramedic of ambulance and emergency care	
4	Assistant Doctor's assistant		

<ul style="list-style-type: none"> • carry out feeding of patients; • carry out disinfection and pre-sterilization preparation of medical instruments, materials and care products for sick children. <p>Study of the emergency medical assistant’s ambulance work .</p> <p>The student should be able to:</p> <ul style="list-style-type: none"> • examine patients with the most frequent emergency conditions, evaluate the data of the examination and interview of the patient; <p>provide pre-medical care;</p> <p>Study of the work <u>of a doctor at the hospital level</u> of therapeutic, surgical, obstetric-gynecological, and pediatric profile.</p> <p>The student should be able to:</p> <ul style="list-style-type: none"> • examine patients with the most frequent medical, surgical, obstetric and gynecologic, pediatric diseases, evaluate the data of inspection and survey of the patient; • formulate preliminary diagnosis, to make a plan of survey, give your nearest and long-term forecast, recommendations for outpatient treatment; • treat patients under the direction of a physician; • right to obtain medical documentation; • participate in the reception of physiological childbirth; • produce primary treatment of newborns. <p>The student should be familiar with:</p> <ul style="list-style-type: none"> • the procedure for discharge, storage, accounting and prescribing medicines (strong, narcotic, expensive); • the work of the physiotherapy department, the technique of procedures; • the work of the pathology department; the organization and conduct of anti-epidemic work. <p>Study of <u>a doctor's work in an outpatient institution</u> (Family Medicine Center).</p> <p>The student should be able to:</p> <ul style="list-style-type: none"> • diagnose at the outpatient level the most common diseases in patients, taking into account the peculiarities of their course, treatment, prevention, medical examination, and examination 	<p>6</p>	<p>hospitals</p> <p>Assistant Doctor's Assistant FMC</p>	
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of their ability to work;

	Total	360		
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(*) 1. The complexity of individual disciplines of the MEP specialist's is set in the range of up to 10 credits.

2. The total labor intensity of the basic components of the MEP p. 1, p. 2 and p. 3 must be at least 50% of the total labor intensity of the specified MEP.

(**) The name of the training cycle p. 2 is determined taking into account the specifics of the educational area that the specialty belongs to.

(***) The state exam is introduced at the discretion of the university.

Each cycle of disciplines has a basic (mandatory) part and a variable (profile) part, established by the university.

The variable (profile) part provides an opportunity to expand or deepen the knowledge, skills and abilities determined by the content of basic disciplines, allows students to continue their education in postgraduate professional education programs, get in-depth knowledge and skills for successful professional activity.

The variable (profile) part consists of two parts: the university component and the discipline of students' choice.

5.3. Requirements for the implementation of the MEP in the specialty

A higher education institution has the right to change the number of hours allocated for the development of educational material for cycles of disciplines within 10%.

5.3.1. Staffing of the educational process

The implementation of the main educational program for training a specialist should be provided by scientific and pedagogical personnel who have a basic education corresponding to the profile of the discipline taught, and an academic degree or experience in the relevant professional field and are systematically engaged in scientific and/or scientific and methodological activities.

The share of teachers with an academic degree and/or academic title in the total number of teachers providing the educational process for the main educational program of specialist training should be at least **65%**, the academic degree of doctor of science and / or the academic title of professor should have at least 10% of teachers.

At least **70%** of teachers (in the rates reduced to integers) who provide the educational process for the professional cycle must have academic degrees and academic titles, while at least 10% of teachers must have the academic degree of doctor of science or the academic title of professor**10**.

At least **10%** of teachers from among the current managers and leading employees of specialized organizations, enterprises and institutions should be involved in the educational process in the disciplines of the professional cycle.

Up to **10%** of the total number of teachers with an academic degree and / or academic title can be replaced by teachers who have practical experience in this field as managers or leading specialists for more than the last 10 years.

5.3.2. Educational, methodological and informational support of the educational process

The main educational program should be provided with educational and methodological documentation and materials for all academic courses, disciplines (modules) of the main educational program.

Extracurricular work should be accompanied by methodological support and justification of the time spent on its implementation and control.

The implementation of basic educational programs should be provided with access for each student to databases and library collections formed according to the full list of disciplines (modules) of the main educational program. During self-study, students should be provided with Internet access. Each student must be provided with at least one academic and one educational-methodical printed and/or electronic publication for each discipline of the professional cycle included in the educational program. The library fund should be equipped with printed and / or electronic editions of the main academic literature in the disciplines of general scientific and professional cycles.

The fund of additional literature should include official, reference, bibliographic, and periodical publications in addition to academic ones, at the rate of 1-2 copies for each of them. 100 students.

Each student should be provided with access to the library collections, which consist of the following list of titles of local magazines:

- Healthcare in Kyrgyzstan
- Bulletin of the Kyrgyz State Medical Academy
- Central Asian Medical Journal of Foreign
- Obstetrics and Gynecology
- Allergology
- Anaesthesiology and resuscitation
- Pathology Archive
- Bulletin of Otolaryngology
- Bulletin of Ophthalmology
- Doctor
- Immunology.
- Cardiology

- Clinical medicine
- Medical Bulletin
- Pediatrics
- Pulmonology
- Rheumatology
- Russian Medical Journal
- Traumatology and Orthopedics
- Therapeutic Archive
- Urology
- Human physiology
- Surgery. N. I. Pirogov Magazine

Students should be provided with the possibility of rapid exchange of information with domestic and foreign universities, enterprises and organizations, access to modern professional databases, information reference and search engines, such as:

- Information and reference materials of the Kyrgyz Republic Health Ministry ;
- information and search engine for intellectual property, patents and trademarks;
- databases on electronic components (medical search engines-MedExplorer, MedHunt, PubMed, etc.).

5.3.3. Material and technical support of the educational process

A higher educational institution that implements the main educational programs for training specialists should have a material and technical base that provides all types of laboratory, disciplinary and interdisciplinary training, practical and research work of students provided for in the university curriculum and complies with current sanitary and fire safety rules and regulations.

The minimum list of material and technical support required for the implementation of the PLO for training specialists includes:

- laboratories for physics, chemistry, biochemistry; biological chemistry; biology; physiology; microbiology and virology; pharmacology; pathological anatomy; pathophysiology;
- anatomical hall, anatomical museum, corpse storage facility;
- specially equipped classrooms and classrooms for studying humanities and socio-economic disciplines, hygiene, public health and public health;
- rooms equipped for receiving and showing patients;
- medical offices equipped with the necessary equipment for working with children and adolescents who receive preventive, diagnostic, curative (therapeutic and surgical) and rehabilitation care.

When using electronic publications, the university must have at least 7 computers with Internet access per 100 students.

When using electronic publications, the university should provide each student with a workplace in a computer class with Internet access during independent training, in accordance with the scope of the subjects studied.

The university must be provided with the necessary set of licensed software.

5.3.4. Assessment of the quality of graduate training

A higher education institution is obliged to guarantee the quality of training of specialists, including by:

- development of a strategy to ensure the quality of graduate training with the involvement of employer representatives;
- monitoring and periodic review of educational programs;
- development of objective procedures for assessing the level of knowledge and skills of students, the competencies of graduates;
- ensuring the competence of the teaching staff;
- regularly conduct self-certification according to agreed criteria to evaluate their activities (strategy) and compare them with other educational institutions with the involvement of employer representatives;
- informing the public about the results of their activities, plans, and innovations.

Assessment of the quality of mastering the PLO of training specialists should include current monitoring of academic performance, intermediate certification of students and final state certification of graduates.

Specific forms and procedures for current and intermediate knowledge control in each discipline are developed by the university independently and brought to the attention of students within the first month from the start of training.

Assessment funds are created to assess students' compliance with their personal achievements with the step-by-step requirements of the relevant PLO (current and intermediate certification), including standard tasks, test papers, tests and control methods that allow them to assess knowledge, skills and the level of competence formation. Evaluation developed and approved by the university. Assessment funds should be complete and adequate representations of the requirements of the State Higher Professional Education System for this specialty, correspond to the goals and objectives of a specific specialist training program and curriculum. They are designed to provide an assessment of the quality of general cultural and professional competencies acquired by graduates in accordance with these requirements. Evaluation funds should be formed on the basis of approximate evaluation funds agreed with the Ministry of Health of the Kyrgyz Republic.

- When developing assessment tools for monitoring the quality of studying modules, disciplines, and practices, all types of links between the knowledge, skills, and abilities included in them should be taken into account, which make it possible to determine the quality of competencies formed by students by type of activity and the degree of general readiness of graduates for professional activity.
- When designing assessment tools, it is necessary to provide for an assessment of students' ability to engage in creative activities, their readiness to search for solutions to new problems related to the lack of specific special knowledge and the lack of generally accepted algorithms for professional behavior.
- In addition to individual assessments, mutual assessments should be used: students review each other's works; students oppose essays, projects, theses, research papers, etc.
- The university should create conditions for maximum approximation of the system of assessment and control of specialists' competencies to the conditions of their future professional activity. For this purpose, in addition to teachers of a particular discipline, employers should be actively used as external experts (representatives of interested medical institutions, research institutes, firms), teachers who teach related disciplines, etc.

Students should be given the opportunity to evaluate the content, organization and quality of the educational process as a whole, as well as the work of individual teachers.

The final state certification is aimed at determining whether the level of professional training of graduates meets the requirements of the state educational standard. The final State certification includes the Final State Exam in the specialty, the purpose of which is to assess the theoretical and practical readiness provided for by the state educational standard of higher professional education in this specialty.

The Final State Certification program is developed in accordance with the state educational standard for the specialty. It includes a list of general medical problems, diseases and pathological conditions, on the basis of which certification test tasks are formed, a list of practical skills and situational clinical tasks.

Students should show their ability and readiness, based on the acquired in-depth knowledge, skills and formed general cultural and professional competencies, to independently solve the tasks of their professional activity at the modern level, professionally present special information, scientifically argue and defend their point of view.

The program of the Final State Exam in the specialty is developed on the basis of the Requirements for the content, scope and structure of the final exam of the Final State Certification in medical and pharmaceutical universities, the current Regulation on the final state certification of graduates of higher educational institutions, approved by the Decree of the Government of the Kyrgyz Republic No. 346 of May 29, 2012.

For an objective assessment of a graduate's competencies, exam questions and assignments should be comprehensive and correspond to selected sections from various training cycles that form specific competencies.

State certification includes:

1. Interdisciplinary comprehensive exam:
 - Stage 1-curation at the patient's bedside;
 - Stage 2-interdisciplinary blank testing;
 - Stage 3- oral questioning on the card.
2. Native history