


AGREED
Educational and Methodological
Professor
Association of Osh State University
Chairman of the Coordination Council,
Associate Professor
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"5" July 2025



OSH STATE UNIVERSITY

**EDUCATIONAL STANDARD
OF SECONDARY VOCATIONAL EDUCATION**

SPECIALTY: 060108 – "Pharmacy"

Qualification: Pharmacist

Osh-2025

At the meeting of the branch Committee on medical education of the Educational and Methodological Association of Osh State University, held on "14" May, 2025, Protocol № 4, the educational standard of secondary vocational education in the specialty 060108 Pharmacy was considered. It was approved by the Coordinating Council of the Educational and Methodological Association of Osh State University and proposed for approval by the Academic Council of Osh State University on "30" June, 2025, Protocol № 9.

Approved by Order № 34.26 of the Rector of Osh State University, in accordance with the order of the Government of the Kyrgyz Republic.

The educational standard has received recommendations from the following foreign experts:

1. **Karataeva Saule Taubaevna** - Teacher of pharmaceutical disciplines at the State Enterprise for PCV Healthcare Organization "Higher Medical College", Shymkent.
2. **Anatoly Vladimirovich Volodin** - Candidate of Medical Sciences, Associate Professor, Director of the State Autonomous Professional Educational Institution "Orenburg Regional Medical College," "Excellent Student of Healthcare of the Russian Federation."
3. **Serik Maksimovich Dzhansegirov** - Director of Taldy-Kurgan Higher Medical College under the Government of the Republic of Kazakhstan.

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Chapter 1. GENERAL PROVISIONS

The educational standard of training in the specialty 060108 Pharmacy was approved by the order of the Osh State University Rector.

The educational standard of the educational program in the specialty 060108 Pharmacy was developed and approved at Osh State University, taking into account the requirements of secondary vocational education.

The educational standard developed at Osh State University (hereinafter referred to as the educational standard) is equivalent to state educational standards, has a unified structure of requirements for secondary vocational education and allows them to perform their functions in terms of ensuring the unity and quality of education, objective control, and sets specific requirements for the development of the educational program being implemented. This educational standard establishes that the requirements for the conditions and results of mastering the basic professional educational programs are not lower than the corresponding requirements of the state standards of secondary vocational education.

Educational standard of specialty 060108 Pharmacy was developed with the participation of the following parties:

Chairperson of the working group:

1. Omurzakova Nurzhamal Magaripzhanovna – Head of BVEP specializing in Pharmacy;

Members:

I. From the medical college:

2. Kolanov Orunbek – Chairman of the Subject Cyclical Commission on Pharmaceutical disciplines;
3. Karabaeva Nurilya Davletalyevna - Teacher of the subject cyclical commission on pharmaceutical disciplines;
4. Zhaanbaeva Zulaika Nazhimovna - Teacher at the Uzgen International Medical College, Head of the 060108 Pharmacy Specialty Program;
5. Raeva Kyzdarkan Tolonovna - Teacher at the Uzgen International Medical College, Chairperson of the SCC General professional disciplines.

II. From the national medial colleges:

6. Tajidinova Dilfuza Zahidinovna – Teacher at Osh Regional Medical College;
7. Tashbaeva Zhyldyz Ashyrbekovna – Teacher of pharmaceutical disciplines at the KUU Osh Medical College;

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8. Namazbekova Kunchiy Mambetahunovna - Teacher of the Department of Pharmaceutical Disciplines at Bishkek Medical College;

9. Koshbaeva Gulnira Kalimovna - Deputy Director of Academic Affairs at Naryn Medical College

10. Murodmatova Matlyulsa Sultanalievna - Teacher at the Jalal - Abad Medical College

III. Employers:

11. Ahmedov Aibek Anarbaevich - Director of Osh city Pharmacy №5,

12. Polonov Alaitbek Talaitbekovich - LLC "Neman" pharm representative, manager,

13. Baitoroeva Anargul Darmanbekovna - LLC "Meditek YUG", manager,

14. Keneshbek unlu Raatbek - LLC "Neman" pharm Jalal-Abad city, pharmacist;

15. Mametova Nursulnu Kurmanbekovna - individual entrepreneur "Mametova", Head of department, pharmacy № 739.

4. From social networks:

16. Rysbekov Nursolot Rysbekovich - Chairman of the Association of Pharmacists and Provisor of the Southern Region,

17. Shammatova Saltanat Sonunbekovna - "Apteka KG", pharmacist,

18. Oruzbaev Dsolutbek Erkinbaevich - Chief Specialist of the "Kyrgyzpharmacy" State Institution under the Ministry of Health of the Kyrgyz Republic for the Batken region;

19. Toktobaev Orulbek Erkinbaevich - Specialist of the Department "Medicines and Medical Devices" under the Ministry of Health,

20. Nuralieva Nuratym Ishandarovna - Head of pharmacy No. 308 at the Children's Infectious Diseases Hospital,

This educational standard is established in accordance with the Decree of the President of the Kyrgyz Republic "On measures to increase the potential and competitiveness of educational organizations of secondary vocational education of the Kyrgyz Republic" dated July 18, 2022 No. 243, Resolution of the Cabinet of Ministers of the Kyrgyz Republic dated November 21, 2022 No. 654 "On Amendments to certain decisions of the Government of the Kyrgyz Republic on granting a special status state secondary educational institutions", Resolution of the Government of the Kyrgyz Republic "On Amendments to Certain Resolutions of the Government of the Kyrgyz Republic, the Cabinet of Ministers of the Kyrgyz Republic on granting the status, in accordance with the Law of the Kyrgyz Republic "On Education" dated August 11, 2023 No. 371 "on approval of the layout of the state educational standard of primary, secondary and higher professional education of the Kyrgyz Republic", the Kyrgyz Republic has a national qualifications system, national qualifications framework, European qualifications framework, sectoral qualifications framework, professional standards, in accordance with with the OSH State University Charter and regulations in force at the time of approval of the educational standard - according to local documents. The procedure for the development, approval and amendment of this educational standard is regulated by the Regulations on the Development, Approval and Amendment of Educational Standards of OSH State University.

Chapter 2. Abbreviations

SES- State Educational standart;

ES - Educational standart;

SCC - subject cyclical commission;

KUU - Kyrgyz Uzbek University;

LLC- Limited Liability Company;

HPE - higher professional education

BVEP - basic vocational education program;

GPC – general professional competence

PC – professional competence;

GC- general competence;

LO- Learning outcomes;

SVE – secondary vocational education;

EMA - educational and methodological association;

TS - teaching staff

OSCE- an objectively structured clinical examination

SC - selective course;

STEAM skills - science, modern technology, engineering, art, formation of mathematical skills

Chapter 3. Terms

The following terms and definitions are used in the self-developed educational standard of secondary vocational education.

- **academic integrity** is a set of values and principles that establish standards of behavior in the development of educational programs and educational activities, including when performing written work (tests, term papers, essays, dissertations), expressing one's position and relationships between participants in the educational process.

- **academic freedom** is a set of delegated powers to organize the content of education, additional types of training and educational activities in elective disciplines in order to create conditions for the creative development of students, teachers and the use of innovative technologies and teaching methods.

- **the basic curriculum** is a catalog of disciplines for the full period of study that prepare students for a profession in a field or specialty (hereinafter referred to as the curriculum). The curriculum includes a mandatory component (basic and university (specialized)), regulates the number of credits allocated for teaching compulsory subjects and subjects of students' choice, sets deadlines and types of practice.;

- **distance education** is a form of self-education (distance learning) using information technology;

- **online form of distance - education** using information technology in real time;

- **competence** - predefined social requirements (norms) in the preparation of a student(s) for training, necessary for effective productive activity in a particular field;

- **credit** is a conditional amount of measurement of labor intensity in the program of basic vocational education;

-**the basic educational program** is a set of educational and methodological documentation regulating the goals, expected results, content and organization of the educational process for the preparation of the relevant field;

- **learning outcome** -the competence gained as a result of studying in the main educational program /module;

- **credit technology of learning** -learning based on the student's choice and independent planning of the sequence of disciplines through the accumulation of credits;

- **independently developed competencies**-competencies introduced by the developers of the standard;

- **semester curriculum** -a curriculum that serves to organize the educational process during a certain academic period (including calculating the labor intensity of teachers' teaching activities per semester);

- **Student's Individual Curriculum (SIC)** - Defines the student's semester curriculum, which is based on the academic disciplines offered for the semester;

- **qualifying disciplines**- academic disciplines reflecting the individual training of a student, included in the qualifying component within the framework of credits established by educational organizations, taking into account the specifics of socio-economic development and the needs of a particular region.;

- industry-specific form of education -the implementation of an educational program by several educational organizations;
- current regulatory internal regulations – the regulatory internal regulations in force during the development of this Regulation;
- business communication and self-organization (self-discipline), creative and critical approach in non-standard situations;
- STEAM skills - science, modern technology, engineering, art, data - usage and management.

Chapter 4. SCOPE OF APPLICATION

4.1. The educational standard (hereinafter referred to as the educational standard - ES) specifies a set of requirements for the development and implementation of basic professional educational programs of secondary vocational education in the specialty **060108 Pharmacy**.

4.2. ES **060108 Pharmacy** specialty establishes the requirements for the training of a specialist in the educational programs and, based on its results, the qualification of a **pharmacist** in this specialty is awarded.

4.3. The independently developed standard of secondary vocational education for the implementation of educational technologies in preparation for the educational program in the specialty **060108 Pharmacy** is the basis for the development of basic curricula as part of protected areas, work programs of academic disciplines, practices and state final certification programs.

4.4. The main users of the ES are: -**060108 Pharmacy** is the basis of organizational and methodological documents for the development, implementation and training of basic educational programs in preparation for an educational program in **Pharmacy**. As well as the teaching and professorial staff of the educational organization in order to assess the quality of mastering secondary vocational education programs, supplement, update, taking into account the achievements of science, technology and the socio-economic sphere, and systematically monitor the achieved learning outcomes.;

-Students of an educational organization for the effective implementation of educational activities while mastering the educational program in the specialty **060108 Pharmacy**;

-the rector and vice-rectors of the educational organization, the educational and methodological association of the educational organization and its relevant branch committees, deans of faculties, directors of institutes and colleges, heads of departments, heads of departments, heads of control centers, etc., responsible within their competence for the quality of graduate training, the organization of the educational process;

-examination and state final attestation commissions that evaluate academic achievements and the quality of education of graduates of educational institutions;

- employers in the relevant field of professional activity to determine the specialty (qualification) when hiring graduates;

- organizations that finance the university, including secondary vocational education;

- authorized organizations that carry out the accreditation of educational programs in the field of education;

- representatives of state executive authorities who ensure compliance with the rule of law, supervision in the education system, and quality control in the field of secondary vocational education;

- applicants for the choice of specialties.

Chapter 5. REGULATORY DEADLINES AND LABOR INTENSITY OF THE EDUCATIONAL PROGRAM DEVELOPMENT

5.1. Requirements for the level of education of applicants. When applying, the applicant must have one of the following documents:

- certificate of basic general education;

- certificate of secondary general education;

- for a diploma of secondary vocational education;
 - diploma of primary vocational education (if there is a document of basic or secondary general education).
- 5.2. In accordance with this educational standard, the program of secondary vocational education is implemented on a full-time basis.
- 5.3. The total labor intensity of the educational program in preparation for the specialty 060108 Pharmacy is 180 credit units, regardless of the form of study, the educational technologies used, and the student's individual curriculum.
- 5.4. The normal period of study for full-time education, including vacations provided after passing the state final certification of the SVE on the basis of secondary general education:
- on the basis of secondary general education -2 years and 10 months;
 - the established standard period for the development of an educational program based on basic general education is extended by 1 (one) year.
- 5.5. The standards of duration of study according to the individual curriculum of the student are determined on the basis of the academic policy of the educational organization and regulatory documents on the organization of the educational process.
- 5.6. When organizing the educational process using credit education technology, the volume of each academic discipline is a whole number of academic credits. 1 academic credit is equal to 30 academic hours. The duration of the academic hour is set at 45 minutes.
- 5.7. The capacity of all types of academic work in the curriculum is determined by ECTS academic credits. The annual labor intensity is 60 credits and the semester labor intensity is 30 credits for full-time education of BPEP of secondary vocational education.
- 5.8. An educational organization grants the right to persons with secondary professional or higher professional education of the appropriate profile to master an educational program in accelerated programs, taking into account existing knowledge and recognition of learning outcomes. Determines the results of training in certain disciplines and/or certain types of on-the-job training that were previously mastered, based on the results of full or partial recertification (offsetting).
- 5.9. Conducting (organizing) the final state certification in online form is not allowed regardless of the types of practices and when using the educational program in online form. It is allowed only in case of emergency.
- 5.10. When implementing a secondary general education program integrated into the secondary vocational education program (11th grade program), a document on secondary general education (certificate) is not issued, grades on secondary general education taught at the college are recorded in the document on secondary vocational education (diploma).

Chapter 6. REQUIREMENTS FOR THE DEVELOPMENT AND IMPLEMENTATION OF THE BASIC EDUCATIONAL PROGRAM

- 6.1. An educational organization independently develops educational programs for secondary vocational education, taking into account the needs of the labor market. The basic educational program is developed on the basis of the professional education standard, the National Qualifications System, the industry/industry qualifications framework and professional standards (if any).
- 6.2. The purpose of the basic educational program of secondary vocational education in the specialty 060108 Pharmacy:
- **in the field of education:** training based on humanitarian, social, economic, mathematical and natural science knowledge, which allows graduates to work successfully in their chosen field, providing them with general and professional competencies that contribute to their social mobility and stability in the labor market.
 - **in the field of upbringing:** the formation of students' social and personal qualities: determination, organization, diligence, responsibility, civic engagement, communication, tolerance, increasing their general culture.

6.3. The relevant structures of the educational organization are, updates the BVEP at least once every 5 (five) years in accordance with the recommendations of interested parties, taking into account the development of technology, technology and the social sphere. Educational program updates include:

- development of a strategy to ensure the quality of graduate training;;
- implementation of periodic monitoring of educational programs;;
- development of objective procedures for assessing the level of knowledge and knowledge of students, skills, and competencies of graduates based on the requirements for graduate competence agreed with the employer;;
- ensuring the quality and competence of the teaching staff;;
- providing the implemented educational program with sufficient resources, monitoring the effectiveness of their use;;
- Conducting regular self-assessment on the minimum accreditation requirements established by the Cabinet of Ministers of the Kyrgyz Republic;;
- informing the public about the results of their activities, plans, and innovations.

6.4. The educational organization implementing the educational program is obliged to:

- the formation of a socio-cultural environment;
- creating the conditions necessary for the comprehensive development and socialization of the individual, maintaining the health of students;;
- to promote the development of educational/extracurricular components of the educational process, including the development of self-government, the participation of students in the activities of public organizations, sports and creative clubs, scientific student societies.

6.5. A set of relevant disciplines (modules) for each cycle of the educational program and their capacity are determined by the educational organization (the relevant structures of the educational organization) independently.

6.6. The set of BVEP disciplines should include mandatory (basic) and selective parts. Optional courses are offered for the professional cycle, and the catalog of disciplines for it is determined by the educational organization (the relevant structures of the educational organization).

6.7. The degree of compulsory disciplines, the sequence of their development and the distribution of labor intensity into groups "A", "B" and "c" are organized in accordance with the provisions of the educational organization on the organization of the educational process and the annexes to this layout.

6.8. The educational organization is obliged to ensure the accessibility of training courses (disciplines, modules) to students BVEP, conduct introductory courses, and determine through a survey the selected courses and preferences of the student to form an individual learning trajectory. The student forms his/her individual curriculum with the participation of an Academic Consultant provided by the educational organization.

6.9. When creating a BVEP, an educational organization is obliged to familiarize students with their rights and obligations, to clarify that the subjects chosen by students are mandatory for them, and their total labor intensity should not be less than stipulated in the curriculum.

6.10. An educational organization is obliged to take into account the policy of gender equality when developing and implementing an educational program, ensure social inclusion, and develop digitalization.

6.11. General requirements for the rights and obligations of students in the implementation of the educational program:

- students have the right to choose specific disciplines within the amount of study time allocated for the development of academic disciplines chosen by students within the framework of the educational program of higher professional education;
- when forming their individual educational trajectory, students have the right to consult with an educational organization on the choice of disciplines and their impact on their future profession;
- in order to achieve results in the development of educational programs in terms of competence development, students have the right to participate in the development of student self-government, the activities of public organizations, sports and creative clubs, scientific student societies;

- students are required to complete all tasks provided for in the educational program of the educational organization within the prescribed time ;
- the student's workload is set at least 38 hours per week, including all types of classroom and extracurricular (independent) learning activities. The maximum weekly workload is set by the educational organization;
- when training a full-time specialist, the volume of classroom classes is at least 35% of the total volume per week;
- the total length of the vacation period in the academic year should be 7-10 weeks, including at least two weeks in winter, depending on the duration of study.

Chapter 7. CHARACTERISTICS OF THE PROFESSIONAL ACTIVITY OF GRADUATES OF THE 060108 PHARMACEUTICAL EDUCATIONAL PROGRAM

7.1. The areas of professional activity of graduates of educational programs in the field of Pharmacy 060108 include:

- **Pharmaceutical activity**-carrying out activities for the reception, storage, manufacture, packaging, labeling, sale of medicines and medical devices, as well as conducting pharmacotherapy on a scientific basis;
- Drug policy and management** – organization and management of pharmacy organizations and pharmaceutical institutions, regulation of product policy and logistics processes;
- **Pharmaceutical expertise and control** -assessment of the quality, safety and effectiveness of medicines and medical products, implementation of state and internal control;
- **Marketing and economic analysis**-pharmaceutical market research, demand analysis and coordination of pharmaceutical product movement;
- Social and therapeutic activities**-advising patients, recommendations on pharmacotherapy, assistance in the safe and proper use of medicines;

7.2. The objects of professional activity of graduates of the educational program in the specialty 060108 Pharmacy are:

- medicines;
- medicinal plant raw materials;
- auxiliary materials;
- the equipment used for preparation of medicines in pharmacy conditions;
- devices, equipment, chemical reagents used for internal pharmacy control;
- Suppliers and consumers;
- regulatory legal support for the production, trade and information activities of a pharmaceutical organization;
- primary labor collectives.

7.3. Types of professional activities for which graduates of the educational program in the specialty 060108 Pharmacy can be trained in the field of education with the qualification of a pharmacist:

- **Organizational:**
- **Production:**
- **Analytical**
- **Managerial:**
- Consulting and information services**

7.4. A specialist who has been qualified as a pharmacist in the specialty 060108 Pharmacy, in accordance with the type (types) of professional activity, is ready to solve the following professional tasks:

Organizational:

- organization of storage of medicines and medical devices in accordance with the requirements of regulatory documents;
- maintaining primary accounting records;
- acceptance of goods from suppliers and their primary control;

-distribution of medicines and medical devices to the public by prescription and without a prescription;

Production:

- manufacture of dosage forms according to individual prescriptions, requirements of healthcare organizations and in the form of intra-pharmacy stocks, including under aseptic conditions;
- sterilization of dishes and auxiliary materials;
- preparation of titrated solutions;
- obtaining purified water;
- preparation and packaging of medicinal plant raw materials.

Analytical:

- conducting quality control of medicines;
- titration of solutions;
- determination of the quantitative composition of medicinal substances in the preparation;
- determination of the qualitative composition of chemicals.
- the use of various methods of analysis in accounting for inventory and cash.

Management:

- organization of the activities of the structural divisions of pharmacy institutions;
- management of the structural divisions of pharmacy institutions in remote rural areas in the absence of a pharmacist with higher education;
- control of the shelf life of medicines.

Consulting and information services:

- informing the public and medical professionals about the range and consumer properties of products sold through pharmacies
- advising the public on the rules for taking and dispensing medicines and storing them at home in accordance with regulatory documents;
- informing the public about possible side effects of medicines.
- consulting on pre-medical care.

Chapter 8. REQUIREMENTS FOR THE RESULTS OF MASTERING THE EDUCATIONAL PROGRAM IN PHARMACY 060108

8.1. As a result of mastering the educational program, the graduate should develop the following general competencies (GCS).

Areas	Competencies	Learning outcomes
Language and communication skills	GC-1: Makes public reports; chooses the style and type of his activity and presents it, correctly, accurately expresses and proves his opinion in written and oral form, outputs research results in the professional field in Kyrgyz, Russian and foreign languages.	LO-1: speaks three languages: Kyrgyz and Russian at the B2 level, a foreign language at the B1 level, and carries out speech activities in the professional field.

National and universal human values	GC-2: In his professional activity, he critically analyzes and evaluates personal-civil relations, is able to initiate and ensure the implementation of ideas aimed at improving the philosophy of statehood, civic identity, patriotism, universal and national values	LO-2: respects universal and national values while preserving identity, national identity, can take care of development and dissemination, can relate to the interests of the state and social identity, civic responsibility.
Soft skills	GC-3: Generates new ideas and can adapt to innovations and unforeseen situations in the external environment through creative thinking. He thinks analytically and reacts critically when organizing and running business projects.	LO-3: Able to generate ideas and think critically, integrate and analyze other points of view, think well-reasoned and constructively in a professional environment, self-control in non-standard business situations, can apply psychological stability and research skills.
STEM skills	GC-4: digital media can use texts, infographics, basic mathematical, engineering, scientific principles, adapt to new trends in various business areas of the digital and creative economy;	LO-4: Uses modern information and telecommunication technologies and mathematical methods, flexibly responds to trends in the technical, digital and creative economy.

8.2. A graduate student of the educational program in the specialty 060108 pharmacy must have the following **general professional competencies (GPC)**:

General professional competencies	
GPC -1	Uses the basics of Latin grammar to create pharmaceutical terms, and can translate prescriptions into Latin.
GPC -2.	Uses information and communication technologies in his professional activities.
GPC -3	Aware of the social significance, the essence of his future profession and shows interest in it.
GPC -4	Can plan his future professional and personal development in the professional field, become an entrepreneur and put it into practice.
GPC -5	Can analyze basic chemical concepts, laws, physico-chemical properties of chemical elements and their compounds
GPC -6	Conducts explanatory work with the population on personal hygiene and the formation of a healthy lifestyle
GPC -7	Helps to preserve the environment and resources, and acts effectively in emergency situations.
GPC -8	Is able to study the morphological and anatomical structure of plant organs and the processes occurring in them, studying the diversity of plants
GPC -9	Is engaged in sports to achieve life and professional goals and promote

	health.
GPC -10	Uses the means of physical culture and leading a healthy lifestyle
GPC -11	Uses natural knowledge about the origin and development of pathological processes
GPC -12	Can search, interpret, and use information based on certified medicine necessary to perform professional tasks in personal and professional development.
GPC -13	Knows the anatomical, physiological features and vital signs of a person of any age in normal and pathological conditions.
GPC -14	Is capable of studying the structure of microorganisms, the basics of genetics and pharmacology.
GPC -15	Effectively communicates with management, colleagues, clients, can work in groups, and is able to train team members in actions.

3.3. A graduate student with the qualification of "Pharmacist" in the specialty 060108 "Pharmacy" must have the following **professional competencies (PC)** for the type of professional activity::

Professional competencies in the organizational field	
PC1	is able to apply regulatory documents in pharmaceutical activities
PC2.	Adheres to the sanitary and hygienic regime, labor protection, technical safety and fire safety rules.
PC3.	Dispenses prescription and over-the-counter medicines, medical products, and other pharmacy products to the public and healthcare organizations.
PC4.	Pharmacy is able to apply the basics of marketing and merchandising in organizations.
PC5.	Can apply the knowledge necessary for conservation, rational use of resources and healthy lifestyle.

Professional competencies in the production sector	
PC6.	Prepares prescription medicines (forms) and internal pharmacy products in accordance with the requirements of healthcare organizations, packages medicines and dispenses them.
PC7.	Knows the ways of using medicinal plant raw materials, organizes its harvesting on the basis of a regulatory document, taking into account the rational use of natural resources.
PC8.	The devices can be washed, sterilized, used for washing small mechanical objects, pharmacy utensils.
PC9.	Knows medicinal plants of Kyrgyzstan, can make medicinal kits.

Professional competencies in the field of analytics.	
PC10.	The ability to determine the correct spelling of a prescription, the correspondence of the ingredients contained in it, the correspondence of the prescribed amount to the patient's age, the specificity of use, and the high indication of the amount in the prescription.
PC11.	Know the mandatory types of internal pharmacy inspection of medicines and expiration date control.

PC12.	The pharmacy analyzes the process of movement of the product ranges and generates the first accounting accounting documents.
PC13.	It has rapid analysis methods for quality control and identity of medicines
Professional competencies in the field of management	
PC14.	The pharmacy organizes the work of the structural divisions of organizations and manages them in the absence of a pharmacist with higher education in remote rural areas.
PC15.	Organizes the acceptance of an assortment of pharmacy products for the storage of medicinal plant raw materials and medicines in accordance with the requirements of the regulatory document.
Professional competencies in the advisory and information sphere	
PC16.	The pharmacy provides an assortment of products to the public and employees of healthcare organizations.
PC17.	Provides first aid.

Chapter 9. REQUIREMENTS FOR THE IMPLEMENTATION OF THE 060108 PHARMACY EDUCATIONAL PROGRAM

9.1. Personnel requirements for the implementation of the educational program

9.1.1. General requirements for the staffing of the educational process:

- the implementation of the BVEP for the preparation of educational programs should be provided by teaching staff with basic education and a duration of study not lower than bachelor's and master's degrees, corresponding to the profile of the discipline taught and systematically engaged in educational (scientific) methodological activities.;
- the proportion of full-time teachers to the total number of teachers in the educational program should be at least 75%;

9.1.2. Requirements for the staffing of the educational process in accordance with the specifics of the educational field: - at least 25% of teachers implementing the educational program must be from manufacturing and/or related business sectors.; - attracting leading domestic and/or foreign teachers (using online or offline forms of education) to guest lectures at least once during the academic year during the implementation of the educational program; - when evaluating the quality of the teaching staff of the professional cycle, employees with more than 10 years of experience in production are taken into account; - the teaching staff implementing the educational program must improve their professional and pedagogical qualifications in the relevant field once every 5 years.;; - when teaching professional disciplines, the selection of teachers with at least 5 years of experience is required to provide theoretical knowledge.

9.2. Requirements for educational, methodological and informational support of the educational process

- 9.2.1. Requirements for the literature fund:** - When implementing the educational program of specialty 060108 Pharmacy, each student should have access to databases and library collections formed according to the full list of disciplines of the educational program.;
- The list of mandatory textbooks and methodological manuals for each discipline must be submitted in accordance with the licensing requirements: for humanities and economics disciplines - within the last 5 years, for special and general education disciplines in natural sciences - within the last 10 years. In addition, you can use unchanged data from the literature published 10 years ago.
 - compliance of mandatory textbooks and teaching aids with the norm of 0.5 copies per student (compliance with licensing requirements);

- providing students with educational literature and/or electronic literature necessary for the implementation of the educational program must comply with licensing requirements. Educational information sources must meet modern requirements;
- the educational process should use regulatory legal acts, local acts, and materials from professional periodicals.

9.2.2. Requirements for e-learning:

- compulsory and additional textbooks for each discipline (module) in the curriculum must be provided in the electronic library.;
- electronic library system every student should have access to the Internet and the digital platforms of the educational institution (computer rooms, teaching rooms).;
- operational information exchange with domestic and foreign universities and organizations should be carried out in compliance with the requirements of the legislation of the Kyrgyz Republic on intellectual property and international treaties of the Kyrgyz Republic in the field of intellectual property;
- access to modern professional databases, information, survey and search engines for students.

9.2.3. Requirements for the placement of electronic forms of teaching materials (complexes) on the relevant digital platforms of the educational institution: Educational and methodological materials (complexes) for each academic discipline (syllabus, assessment tools, etc.) should be posted on the digital (electronic) platform of the educational institution before the start of the educational process.

9.3. Requirements for the logistical support of the educational process. An educational organization implementing the basic professional educational program of secondary vocational education must have a material and technical base that complies with current sanitary and fire safety rules and regulations, ensuring the conduct of all types of laboratory, disciplinary and interdisciplinary training, practical training of students provided for in the curriculum. The implementation of the main professional educational program in the specialty should ensure that the student performs laboratory and practical work, including practical tasks using personal computers as a mandatory component. The usable area for 1 student should be at least 3m².

9.3.1. Special classrooms (laboratory, linguophone, computer, virtual, multimedia, etc.) :

1. Kyrgyz / Russian language (posters and plaques).
2. Socio-economic disciplines (posters and stands).
3. Psychology (posters and stands, visual aids).
4. Foreign language (posters and stands).
5. Entrepreneurship and management in pharmaceuticals (posters and stands).
6. Professional mathematics (posters and stands).
7. Computer science (posters and stands, computers).
8. Human anatomy and physiology (posters and stands, the human skeleton as its component parts, mannequins, illusions).
9. Microbiology (visual aids, microscope, Petri dish, liquid and solid media, soup, special solutions, laboratory utensils).
10. Biology and medical genetics (posters and stands, microscope).
11. Organization and economics of pharmacy (posters and stands, reference literature and regulatory documents, computers, cash registers).
12. Pharmacology (interactive whiteboard, posters, medicines by groups)
13. Sports and recreation complex
14. From primary military medical training and disaster medicine (posters and stands, mannequins, phantoms, visual aids, medical bandages, splints, patient care items, hemostatic tourniquets).
15. Interactive whiteboard, projector.

Laboratories: 1. Inorganic chemistry (suction cabinet, chemical reagents, laboratory utensils, posters, stands, Periodic table)

2. Organic chemistry (chemical reagents, posters, stands, Periodic table)

3. Analytical chemistry (chemical reagents, laboratory utensils for analysis, posters, stands, reference literature)

- 4. **Pharmaceutical chemistry** (chemical reagents, laboratory equipment for analysis, posters, stands, Periodic table)
- 5. **Pharmaceutical technologies** (medicinal substances, burettes, laboratory and pharmacy utensils, scales with various scales, a cabinet for storing medicinal substances, a pharmaceutical table, reagents, scales, pharmacy cabinets, stands, posters, reference literature)
- 6. **Botany and pharmacognosy** (stands, posters, reference literature, samples of medicinal plant raw materials, microscopes, laboratory utensils)
- 7. **Computer class**

26. **Sports complex:** - sports hall,
- an open wide
-field stadium.

27. Halls:

- library, electronic library;
- reading room with internet access;
- electronic library;
- a hall for solemn meetings ;
- medical center I;
- the dining room.

9.3.2. Conditions of on-site training (on-site training): An educational organization should provide compulsory practical training, on-the-job training, aimed at acquiring general and professional knowledge, skills and abilities on the basis of enterprises in order to consolidate professional knowledge and skills. For this purpose, on-the-job training should be conducted once a month in pharmaceutical and medical institutions. In the relevant professional disciplines, NGOs should develop and approve programs that include on-the-job training conducted at the enterprise or in the organization.

9.4. Requirements for knowledge quality assessment

9.4.1. Types of checks: Assessment of the quality of training of students and graduates should include their current, intermediate and final state certification. The current certification of students is carried out during the academic semester based on the assessment system established (approved by the Academic Council) by the educational organization implementing the educational program. The intermediate assessment of students is conducted every semester, and the results of the current assessment for the semester in all disciplines / modules must be organized in accordance with the local acts of the educational organization.

9.4.2. Assessment Fund and assessment criteria: Bases and criteria for assessment tools should be developed, including standard tasks for current, intermediate and final attestation, test papers, unit tests and practical tasks that allow assessing the level of acquired competencies for compliance of individual student achievements with the phased or final requirements of the educational program. According to the types of examinations for each discipline, assessment tools and assessment criteria are developed prior to the start of the educational process and should be posted on the educational institution's website for access to students.

9.5. Requirements for the organization of practice.

9.5.1. General provisions on practice: When studying under educational programs, internships conducted for students are considered as a form of educational process that forms professional competencies in the training of a specialist. Each student is required to complete the types of practice specified by the educational organization. An educational organization must ensure that production practices are conducted in production organizations, depending on the direction and specialty of professional education.

9.5.2. When preparing for the educational program of secondary vocational education, the following types of practice are carried out: -Educational and production practice * "Educational and industrial field practice for the acquisition of primary professional skills (herbarization) in botany"; -Educational and production practice * "Primary professional skills in pharmaceutical technology educational and production practice for the formation of"; * "On Pharmaceutical technologies and pharmacognosy educational and production practice "; * "From pharmaceutical technology by

specialty profile educational and production practice " - Prequalification practice (as a specialist)

9.5.3. Requirements for types of internships The areas of the main types of internships at the college are determined according to the curricula of the specialties.

The main ones are educational and production, prequalification practice. Training and production practices should be conducted in pharmaceutical institutions, in drug warehouses, in order to gain work experience in developing the first professional skills based on theoretical knowledge.

Educational and production practice: The practice of acquiring primary professional skills (herbarization) in botany. This practice forms students' knowledge, skills and abilities of the morphological and anatomical structure of plant organs, the physiological processes and diversity of plants occurring in them, as well as medicinal plants, methods of manufacturing herbariums from their organs, and fosters a careful attitude to the protection of the plant environment and their rational use. Field practice is conducted in nature reserves and botanical gardens.

Educational and production practice:

Educational and industrial practice on the formation of primary professional skills in the field of pharmaceutical technologies

1. Students strengthen and deepen the theoretical knowledge gained in the learning process, and develop general and professional competencies in the main types of professional activities.;

2. Reading the production structures of pharmaceutical companies, they learn. Educational and industrial practice in pharmaceutical technologies and pharmacognosy: consolidation and deepening of theoretical knowledge acquired by students in the learning process. This practice is aimed at improving students' primary practical experience, increasing the formation of their general and professional competencies, and identifying their readiness for independent work. The goal is also to develop the skills of collecting, drying, storing medicinal plant raw materials and working with regulatory documentation.

Educational and industrial practice in pharmaceutical technology by specialty profile:

Acquisition and improvement of practical skills in the preparation of medicines in a pharmacy setting. Preparing students for independent work; they should be carried out in pharmaceutical institutions. Students' professional skills are being developed. Prequalification practice is the final stage of training and is conducted in pharmaceutical institutions, depending on the specialty, after students have fully mastered the theoretical and practical training program. To expand and consolidate the theoretical knowledge acquired by students in the learning process, to form their practical skills in applying the acquired knowledge in the pharmacy industry. Improving the quality of professional training of students, the formation of professional and civic qualities of a specialist as a person, as well as the education of students in labor and industrial discipline, respect for work, teamwork. Students undergo practical training in Osh city medical institutions, city pharmacies and district pharmacies. The educational institution is obliged to provide the documents necessary for carrying out the above-mentioned types of practice.

9.6. Final certification. Requirements for the comprehensive final state exam and justification for the allocation of labor intensity (number of credits) : The final state certification of students should be conducted after completing the full course of study. The types of state certification examinations and the procedure for their organization should be determined by the educational organization in accordance with the regulatory legal acts of the Kyrgyz Republic and the educational organization governing the conduct of the final state certification of graduates. The final state certification should be allowed to graduates who have no academic debt and have completed the full course of study provided for in the curriculum.

9.6.1. Requirements for comprehensive final state certification and justification of academic load allocation (number of credits): The final state certification of graduates should be conducted in the form of a comprehensive state interdisciplinary examination in the specialty, which provides for an assessment of the theoretical and practical professional training of graduates in this specialty based on state requirements for the minimum content and level of training. The final state certification should consist of two stages:

- Stage I-testing.
- Stage II-an objectively structured clinical examination ;

A comprehensive final state exam evaluates the student's knowledge, theoretical and practical skills, and clinical work experience, and must have at least 3 credits of study load to prepare for tests, practical skills, and situational tasks.

The final assessment should be based on the average result of the 2nd stage of the state final assessment.

Chapter 10. SAMPLE OF THE BASIC CURRICULUM OF THE EDUCATIONAL PROGRAM

Blocks	Cycles	Cycles directions	Disciplines	Divisions of credits into groups			Divisions of hours			1-		2-		3-		4-		
				"A"	"B"	"C"	total	audit	NIV	1-semester	2-semester	1-semester	2-semester	1-semester	2-semester	3-semester	4-semester	1-semester
1-block	1-cycle, General education (12 credit)	Language and communication skills	Kyrgyz language Russian language English															
		National and universal human values	Catalogue disciplines №															
	STEM skills	Catalogue disciplines №																
	Physical education																	
2-block Practices	2-cycle, General professional education	General professional disciplines																
	3-курс, Professional education	Professional disciplines																
3-block	State final certification																	

Note: The basic curriculum is developed using Appendices 1-3 according to this scheme.

The first block of the curriculum consists of 3 cycles: a cycle of general education, a cycle of general vocational education and a cycle of vocational education.

The general educational cycle is divided into areas (catalog of disciplines) under the title "language and communication skills", "national and universal values", "Soft skills", "STEM skills". Each field offers at least 3 disciplines, and the catalog of disciplines is determined by the educational organization. Students can independently choose the disciplines offered in the fields.

Academic disciplines in the entire cycle of the basic curriculum are divided into groups "A", "B", "C" according to the degree of commitment and sequence of assimilation of the content.:

"A" is a discipline that follows the sequence of disciplines during the semester specified in the basic curriculum, and the disciplines required for study.

"B" - the sequence of disciplines does not matter, it is mandatory reading. Students study the disciplines of this group, independently planning them for the desired semesters for the specified academic years. The student can choose the disciplines of group "C" at his discretion from the catalog. The semesters of subjects in this group should be clearly indicated in the curriculum.

Group "C" offers a catalog of disciplines, and students can choose only one discipline from each catalog. Disciplines in the same catalog should be related.

Group "C" allows students to deepen the disciplines of group "A" of the basic curriculum, acquire additional competencies to ensure graduate competitiveness, taking into account the requirements of the labor market and the achievements of science and technology.

The disciplines of group "C" can be updated every academic year, taking into account the requirements of the labor market and the achievements of science and technology.

The basic curriculum for secondary professional medical education distribution of total labor intensity

Structure of the educational program		Labor intensity of educational program blocks (credit)		
Дисциплиналар		«А»	«В»	«С»
1-block	General educational disciplines	104-158 credit		
	Professional cycle	12 credit		
	General educational disciplines	15%-25%	6%-10%	
	Professional cycle	50%-60%	20%-25%	20%-25%
Дене тәрбия	72-120 hours			
2-block	Practice	20-70 credit		
3-block	State final certification	2-4 credit		
The overall complexity of the educational program		At least 180 credit		

According to the cycles of compulsory disciplines of the basic curricula of secondary professional medical education, the distribution and labor intensity

Blocks	Cycles	Cycles directions	Disciplines	Divisions of credits into groups			Divisions of hours			1- academic year			2- academic year			3- academic year			
				"A"	"B"	"C"	total	audit	SW	1-semester	2-semester	3-semester	4-semester	5-semester	6-semester				
1- block	1-cycle. General education (12 credit)	Language and communication skills		4															
																			National and universal human values
	STEM skills	4																	
																	Physical education		
	General professional disciplines																		
																	Professional disciplines		
2-cycle. General professional education																			
	3-цукл. Professional education																		

The catalog of disciplines of the basic curriculum

Note: the disciplines in the "catalog of disciplines" of the general education cycle are selected by the student.

Catalogue #	Catalogue direction	Title of catalogue disciplines	Amount of credit
1 discipline catalogue	National and universal values	English	4
		Kyrgyz language	
		Russian language	
		German language	
2 discipline catalogue	Soft skills	History of the Fatherland, National Values and Culture	4
		Morality and Faith	
		Ecological Knowledge and Culture in Professional Activity	
		Manasology	
3 discipline catalogue	STEM skills	Project practice	
		Critical Thinking, Design Thinking	
		Self-discipline (self-knowledge) and Psychology	
4 discipline catalogue	Language and communication skills	Industry Mathematics	4
		Digital Technologies in Professional Activity	