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MINISTRY OF EDUCATION AND SCIENCE OF THE KYRGYZ REPUBLIC
EDUCATIONAL AND METHODOLOGICAL ASSOCIATION FOR HIGHER
MEDICAL AND PHARMACEUTICAL EDUCATION
AT THE MES of the KR

COMPETENCE CATALOGUE
University graduate in the specialty 560005 “Pharmacy”
UNDERGRADUATE LEVEL

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Competencies catalog of a university graduate in the specialty "Pharmacy"
(undergraduate level)

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EXPLANATORY NOTE

Pre-graduate training in the specialty "Pharmacy" provides professional training of a specialist who has deep theoretical and practical knowledge and is ready to carry out professional activities.

The areas of professional activity of a graduate who has mastered the specialty program are:

- healthcare (in the sphere of medicines circulation, medical devices, and other pharmacy products),
- administrative and managerial (in the sphere of medicines circulation),
- education and science (in the field of scientific research),
- other areas of activity related to health protection.

According to the National Classification of Occupations, the main duties of a specialist in the field of pharmacy are to study pharmaceutical concepts and methods and develop recommendations for the use and manufacture of medicines.

In accordance with the legislation of the Kyrgyz Republic regulating activities in the sphere of medicines circulation, a specialist can carry out **pharmaceutical activities in the following areas (types of activities):**

- organizational and managerial;
- control and licensing agreement;
- production equipment;
- sales of medicines and other pharmacy products;
- marketing;
- informational, advisory and educational services;
- chemical and toxicological testing;
- scientific research.

GRADUATE COMPETENCIES

A graduate's competencies characterize his / her potential ability to use the acquired knowledge, skills, and practical experience in professional and social activities.

In the catalog, competencies are divided into two groups: common (general, instrumental, social and personal) and professional. They must be mastered by a graduate in accordance with the requirements of the State Educational Standard of higher Professional education in the specialty "Pharmacy".

- **Common competencies** reflect the needs of society and the individual for the general cultural, social and personal qualities of the graduate, knowledge and ability to apply instrumental competencies upon completion of a higher education program of the appropriate level.
- **Professional competencies** reflect the demands of the labor market regarding the readiness of a graduate of a higher education program of the appropriate level and specialty of training to perform certain tasks of professional activity and related

labor functions from professional standards (if any) for the appropriate level of professional qualification. In addition, these competencies reflect the demands of the labor market regarding the knowledge of graduates of higher education programs in the specialty of preparation of the basic foundations of professional activity, taking into account the potential development of the field (sphere) or areas (spheres) of activity (regardless of the orientation of the program to specific tasks and (or) objects of activity).

The results of mastering the specialty program are determined by the competencies acquired by the graduate, i.e. his ability to apply knowledge, skills and personal qualities in accordance with the tasks of professional activity.

In connection with the adoption of Government Resolution No. 798 of December 11, 2017 "On amendments to the Government Decree Law of the Kyrgyz Republic "On Postgraduate Medical Education in the Kyrgyz Republic". Order of the Ministry of Health of the Kyrgyz Republic No. 303 dated July 31, 2007 and Order of the Ministry of Health of the Kyrgyz Republic No. 387 dated May 30, 2018 "On approval of the Nomenclature of medical and pharmaceutical specialties, the nomenclature of positions and the list of compliance of medical and pharmaceutical specialties with positions in healthcare organizations of the Kyrgyz Republic" for graduates of the Faculty of Pharmacy, postgraduate education is provided (on a voluntary basis) in the following specialties::

- 1) Organization of pharmaceutical business;
- 2) Drug technology;
- 3) Pharmaceutical Chemistry and Pharmacognosy;
- 4) Clinical pharmacy.

Due to the possibility of obtaining postgraduate education in the listed specialties, it was necessary to provide for the scope and levels of the required competencies at the pre-graduate level.

Forming competencies, we took into account the labor actions of the graduate, the knowledge and skills necessary for this. This catalog defines tasks that correspond to the listed areas of activity.

On the basis of this catalog:

Defined:

- Purpose and content of pre-graduate pharmacist training
- The level of competence, knowledge and skills of the pharmacist.

Developing:

- Working pharmacist training programs
- Criteria for evaluating the quality of student training
- Standard requirements for pharmacists' certification
- Standards of pharmacists' professional activity

Being organized:

- Learning process
- Professional orientation of applicants to medical universities at the Faculty of Pharmacy

Held:

- Certification of graduates

The following categories are used to indicate the level of knowledge:

Level 1-theoretical foundations - category "know"	Level 2-practical skills-categories "be able", "master"
In the course of training, the student must: reproduce and explain the training material with the required degree of accuracy and completeness	In the course of training, the student must: <i>"Be able"</i> – to solve typical problems based on reproducing standard solution algorithms; to have the ability to repeatedly apply the skill. <i>"Master"</i> – to solve complicated tasks based on acquired knowledge, skills and abilities, to apply them to solve atypical situations, is formed in the process of gaining experience.

The list of specific competencies (knowledge and skills) in disciplines is presented in educational and methodological complexes.

Developing the competence catalog, we used the recommendations of the World Health

Organization (WHO), the International Pharmaceutical Federation (IPF), the experience of foreign countries, such as Austria, Great Britain, USA, Switzerland, and neighboring countries (Russian Federation, Republic of Kazakhstan), information submitted to the Federal State Educational Standard for the specialty "Pharmacy" 2016,

Order of the Ministry of Education and Science of the Russian Federation "On approval

of the Federal State Educational standard of higher education – specialty in the specialty "Pharmacy" dated March 27, 2018 No. 219, normative documents regulating activities in the field of drug circulation of the Kyrgyz Republic, are listed in the Catalog Appendix.

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

A graduate of the specialty **560005 Pharmacy** with the qualification "specialist" in accordance with the goals of the MEP and the tasks of professional activity specified in paragraphs 3.4 and 3.8 of State Higher Professional Education Standard

must have the following competencies:

a) common:

- General scientific competencies (SC):

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

SC-2 is able and ready to analyze significant political events and trends, to master the basic concepts and laws of the world historical process, to respect historical heritage and traditions, to evaluate state policy, to form a civic position;

SC-3 – Is able and ready to collect, process and interpret data necessary for forming judgments on relevant social, scientific and ethical issues using modern information technologies;

SC-4 –is able and ready to work in a team, tolerant of social, ethnic, religious and cultural differences.

- Instrumental competencies (IC):

IC-1-is able and ready to work with computer equipment and software for system and application purposes for solving professional tasks;

IC-2 - Is able and ready to use information, bibliographic resources, information and communication technologies, taking into account the basic requirements of information security;

IC-3 – is able and ready for written and oral communication in the state, official languages, to master one of the foreign languages to solve professional problems;

IC-4 – Is able and ready to use management methods; organize the work of performers; find and make responsible management decisions in the context of different opinions and within their professional competence.

- Social, personal and general cultural competencies (SPC):

SPC-1 is able and ready to implement ethical, deontological and bioethical principles in its professional activities;

SPC -2 – is able and ready to master the techniques of professional communication; build interpersonal relationships, work in a group, constructively resolve conflict situations, and tolerate social, ethnic, confessional, and cultural differences;

SPC-3- is able and ready for continuous professional development, self-knowledge, self-development, self-actualization; manage time, plan and organize activities, build a strategy for personal and professional development and training;

SPC-4 – is able and ready to carry out its activities in accordance with the moral and legal norms adopted in society, comply with laws and regulations on working with confidential information, and bear social and ethical responsibility for decisions taken;

SPC-5 – is able and ready for logical and reasoned analysis, for public speech, for conducting discussions and polemics, for carrying out educational and educational activities, for cooperation.

b) professional (PC):

- General professional competencies:

PC-1-is able and ready to assess morpho-functional, physiological conditions, pathophysiological processes in the human body, identify clinical syndromes of socially significant and most common diseases and urgent conditions for solving professional tasks;

PC-2 – is able and ready to use specialized equipment and medical devices intended for professional use;

PC-3- is competent and ready to use methods and means of physical culture to ensure full-fledged social and professional activities;

- Pharmaceutical activities:

PC-4 – is able and ready to participate in the implementation of the main provisions of the State Drug Policy of the Kyrgyz Republic;

PC-5 – is able and ready to participate in the development and improvement of medicinal products, their production, examination, registration, preclinical and clinical trials in accordance with the requirements of international and national standards;

PC-6 – is able and willing to use the basics of economic and legal knowledge in their professional activities;

PC-7 – is able and ready to carry out wholesale and retail sales of medicines;

PC-8- is able and ready to provide storage of medicines and medical devices;

PC-9 – is able and ready to carry out the transportation of medicines, taking into account the principles of transport logistics and compliance with the requirements of the cold chain;

PC-10 – is able and willing to participate in procedures for importing medicines into the Kyrgyz Republic and export from the Kyrgyz Republic;

PC-11- is able and ready to participate in the implementation of state programs of preferential drug provision at the outpatient and inpatient levels;

PC-12 is able and ready to use communication processes in managing and communicating with healthcare professionals, pharmaceutical personnel, patients, their relatives and caregivers, and the general public;

PC-13 – is able and ready to provide informational and advisory assistance to healthcare professionals and drug users in accordance with the rules of good pharmacy practice;

PC-14 - is able and ready to carry out sanitary and educational work and form the population's motivation to maintain health and a healthy lifestyle;

- Organizational and managerial activities:

PC-15 is able and ready to participate in organizing the activities of pharmaceutical organizations, including related to occupational health and safety, prevention of occupational diseases, monitoring compliance and ensuring environmental safety;

PC-16 – is able and ready to apply the basic principles of management in the pharmaceutical industry, including in pharmaceutical organizations and their

structural divisions;

PC-17 – is able and ready to organize drug quality control in pharmaceutical organizations;

Control and permitting activities:

PC-18 – is able and ready to carry out quality control of medicines during their circulation on the market, including control in the process of their improvement and monitoring of undesirable effects;

PC-19 – is able and ready to evaluate the quality of medicinal plant raw materials (used plant organs, histological structure, chemical composition of active and other groups of biologically active substances);

PC-20- is able and ready to provide quality control of medicinal products in the conditions of pharmaceutical organizations;

PC-21 – is able and ready to take measures for timely detection of drugs that have fallen into disrepair, drugs that have expired, falsified, counterfeit and substandard drugs, and their withdrawal from circulation for further destruction in accordance with the current legislation;

PC-22 – is able and ready to participate in conducting chemical and toxicological research to diagnose acute poisoning with drugs, poisons, etc., drug and alcohol intoxication;

- Production activities:

PC-23 – is able and ready to implement technological processes in the production and manufacture of medicines in compliance with the requirements of international and national standards;

PC-24 – is able and ready to organize the preparation of medicinal plant raw materials, taking into account the rational use of medicinal plant resources;

-Medical activity:

PC-25 – is able and ready to take part in providing assistance to the population in emergency situations at the evacuation stages, including in organizing the supply of medicines and MI;

PC-26- is able and ready to use first-aid emergency techniques;

-Research activities:

PC-27 – is able and ready to analyze and publicly present scientific pharmaceutical information;

PC-28 – is able and ready to participate in the formulation of scientific problems and their experimental implementation;

PC-29 – is able and ready to work with scientific literature, analyze information, search, and turn what he has read into a tool for solving professional problems (highlight the main points, consequences, and suggestions from them).

Competence lists are defined based on the national qualifications framework, industry / sector qualifications framework, and professional standards (if any).

