Pharmaceutical Technology. Retraining

I.M. Sechenov First Moscow State Medical University

Degree or qualification is awarded: **Certificate of Retraining**

Language of study: **Russian**
Mode of study: **full-time**
Duration: **504 hours**
Availability of free education: **no**
Price:

Programme curator: **Irina B. Shilova**
Tel.: **+74956562575**
E-mail: kftif@mail.ru

The program is designed for pharmacists-technologists who have a break from work in the specialty for more than 5 years.

The knowledge obtained by students:

- legislation of the Russian Federation on the pharmaceutical industry, as well as on the protection of the health of citizens and ensuring sanitary and epidemiological welfare of the country;
- the structure of the modern healthcare system of the Russian Federation, legal, legislative and administrative procedures and policies relating to all aspects of pharmaceutical activity;
- special aspects social security and welfare, fundamentals of health insurance in the Russian Federation, healthcare systems in the Russian Federation;
- fundamentals of organizing pharmaceutical care (outpatient and inpatient) to different population groups and the fundamentals of organizing drug provision to outpatients and inpatients at the full cost of the drugs, as well as to citizens who are entitled to social assistance;
- the principles of clinical and pharmacological approaches to choosing medicine groups for the pharmacotherapy of major diseases, pharmacological groups of drugs, pharmacodynamics and pharmacokinetics of drugs, most important toxic effects and side effects, the main indications and contraindications, interactions of drugs and forms of dosage incompatibility;
- general methods of assessing the quality of drugs, the possibility of using each method depending on the method of preparation of pharmaceutical products, raw materials, structure of pharmaceutical substances, physical and chemical processes that may occur during storage and handling of drugs; factors affecting the quality of medicines in all phases of treatment; determination of the main factors depending on the properties of drugs;
- the nomenclature of raw medicinal plants and medicines of herbal and animal origin allowed for use in medical practice; main group of biologically active compounds of natural origin and their essential physical and chemical properties, biosynthesis of major groups of biologically active substances;
- rules for the examination of pharmaceutical prescriptions and requirements of the medical institutions; methods of need and demand determination for different groups of drugs; storage technologies of pharmaceutical goods assortment; release of drugs from the pharmacy and public health facilities; organization of manufacture as an intrapharmacy storage and upon requests from medical institutions medicines in the pharmacy enterprises;
- manufacturing technology of medicines in pharmacies: powders, aqueous solutions for internal and external application, and in viscous solutions of volatile solvents, ocular drugs forms, solutions for injections and infusions, suspensions for enteral and parenteral administration, emulsions, aqueous extracts from medicinal plants, sophisticated combination of drugs with a liquid dispersion medium, ointments, suppositories;
- rules and standards for sanitary and anti-epidemic regime, rules to ensure aseptic manufacture of drugs, pharmaceutical order in accordance with the current regulatory documentation;
- difficult and irrational drug prescriptions; the problems of a possible pharmaceutical, pharmacodynamic, pharmacokinetic incompatibility of drugs; problem of solutions incompatibility.

Acquired skills

- To ensure a sanitary conditions in at a pharmaceutical organization and at manufacturing sites; ensure aseptic manufacturing conditions;
- Perform an expertise of pharmaceutical prescription;
- Establish the possibility of the manufacturing pharmaceutical products taking into account the compatibility of ingredients in the inscription;
- To carry out the manufacture of all forms of pharmaceutical products;
- To solve the problems of physical and chemical, structural and mechanical stability of the antimicrobial pharmaceutical forms;
- Take into account the effect of storage conditions and type of packaging on the stability of pharmaceutical forms;
- To carry out stage quality control of pharmaceutical forms and standardize pharmaceutical products;
- To define the group of drugs for the treatment of certain diseases and exercise selection of the most effective and safe over-the-counter drugs;
- To explain the action of drugs prescribed by a medical specialists;
- Supervise the work of pharmacists, to provide them with practical assistance and advice during the process of pharmaceutical manufacture and quality control of medicines.

Acquired competencies:

- receiving and conducting inspections of pharmaceutical prescriptions and requirements of medical and preventive treatment institutions;
- release of prescription and OTC drugs and medical devices to the population and health facilities;
- amanufacture of pharmaceutical drugs: powders, aqueous solutions for internal and external use, solutions, viscous and volatile solvents, ophthalmic dosage forms, suspensions for enteral and parenteral administration, emulsions, aqueous extracts from medicinal plants, sophisticated combination of drugs with a liquid dispersion medium, ointments, suppositories as an individual prescription, and as a local pharmaceutical compounding;
- the use of specialized equipment in the manufacturing process of medicines;
- registration for the release of dosage forms manufactured in drugstore;
- composing a passport of written for dosage forms manufactured in a drugstore;
- interpretation of the results of the analysis of drugs to assess their quality;
- choosing the most effective and safe OTC medicines for the treatment of a particular disease;
- Filling-up standard form paperwork in accordance with the requirements of the regulatory documentation;
- create the necessary sanitary conditions in a pharmaceutical organization;
- registration of adverse drug reactions;
- pharmaceutical counseling of patients and physicians.

The trainees should have the following professional competences:

- Ability and willingness to inform physicians on the use of new drugs, their particular pharmacotherapeutic group, indications and contraindications for use;
- Ability and willingness to provide advice to the public on the use of new dosage forms and compatibility of medicines and medical products.

Specializations within this programme