

Summary of the working program of the academic discipline

« **Modern Methods of Pharmaceutical Analysis** »

(name of the academic discipline)

General Educational Program of higher education (specialist's degree programs)

33.05.01 “Pharmacy”

Department: Pharmaceutical Chemistry and Pharmacognosy

1. The purpose of mastering the discipline: participation forming the relevant competencies (UC-1, UC-2), professional (PC-4, PC-7) competencies

2. Position of the academic discipline in the structure of the General Educational Program (GEP).

2.1. The discipline (VARIATIVE PART) refers to the core part of Block B.1V.OD.8 of GEP HE (Academic discipline index).

3. Deliverables of mastering the academic discipline and metrics of competence acquisition

Mastering the discipline aims at acquiring the following universal (UC) or/and general professional (GPC) or/and professional (PC) competencies

p / no.	Competence code	The content of the competence (or its part)	Code and name of the competence acquisition metric	As a result of mastering the discipline, the students should:		
				Know	Be able to	Possess
1.	UC-1.	Able to realize critical analysis of problem situations based on a systematic approach, develop strategy actions	UC-1.1. Analyzes the problem situation as a system identifying its components and connections between them UC-1.2. Identifies gaps in the information needed to solve a problem situation, and designs processes for their elimination UC-1.3. Critically assesses reliability of information sources, works with conflicting information from different sources UC-1.4. Develops and meaningfully argues the strategy of solving the problem situations based on the system and interdisciplinary approaches UC-1.5. Uses logical and	<ul style="list-style-type: none"> methodology of abstract thinking for systematization of processes and construction of cause-and-effect relationships; modern theoretical and experimental methods for the implementation of own and borrowed results of scientific research into practice. 	<ul style="list-style-type: none"> abstract, analyze and synthesize the information received; highlight and to systematize the essential properties and connections of objects, to identify the main patterns of the objects under study; search, select and analyze information obtained from various sources in order to make the best decision at the modern scientific level, in accordance with professional tasks and the requirements of legal documents. 	<ul style="list-style-type: none"> methods of self-control, abstract and analytical thinking; skills in analyzing methodological problems that arise in solving research and practical problems, including those in interdisciplinary areas; skills of presenting an independent point of view

			methodological tools for critical evaluation of modern concepts of philosophical and social nature in its subject areas			
2.	UC-2.	Able to manage the project at all stages of its life cycle	<p>UC-2.1. Formulates a project task on the basis of the set problems and a method of its solutions through the implementation of the project management</p> <p>UC-2.2. Develops a project concept within the framework of the designated problem: formulates the purpose, tasks, justifies the relevance, significance, expected results and possible areas of their application</p> <p>UC-2.3. Plans necessary resources, including taking into account their replaceability</p> <p>UC-2.4. Develops a project implementation plan using planning tools</p> <p>UC-2.5. Monitors the progress of the project, corrects deviations, makes additional changes to the project implementation plan, clarifies zones of responsibilities of project participants</p>	principles for developing a project implementation plan in the field of professional activity at all stages of its life cycle	develop a project implementation plan in the field of professional activity at all stages of its life cycle, providing for problem situations and risks	methods of planning and executing projects under conditions of uncertainty, managing the project (supporting the implementation of the project)
3.	PC-4.	Able to participate in monitoring the quality, effectiveness and safety of medicines and medicinal plant raw materials	<p>PC-4.1. Conducts pharmaceutical analysis of pharmaceutical substances, excipients and medicines for medical use of factory production in accordance with quality standards</p> <p>PC-4.2. Performs</p>	<ul style="list-style-type: none"> • laws and legislative acts of the Russian Federation, regulatory and methodological materials of the Ministry of Health of Russia, regulating the procedure for quality control of 	<ul style="list-style-type: none"> • apply chemical, physico-chemical methods of intra-pharmacy quality of drugs in the conditions of pharmaceutical organizations; • draw up documentation of the established form for the 	<ul style="list-style-type: none"> • basic chemical and physico-chemical methods of intra-pharmacy quality control of drugs in the conditions of pharmaceutical organizations; • registration of documentation of

			<p>intra-pharmacy quality control of medicines for medical use manufactured in a pharmacy organization</p> <p>PC-4.3. Conducts pharmacognostic analysis of medicinal plant raw materials and medicinal herbal preparations</p> <p>PC-4.4. Informs in accordance with the procedure established by law about the non-compliance of the medicinal product for medical use with the established requirements or about the non-compliance of the data on the effectiveness and safety of the medicinal product with the data on the medicinal product contained in the instructions for its use</p>	<p>medicines in the conditions of pharmaceutical organizations;</p> <ul style="list-style-type: none"> • methods of analysis used in the quality control of drugs in the conditions of pharmaceutical organizations; • monitor drug quality assurance systems; • the process of providing equipment and consumables for quality control in the conditions of pharmaceutical organizations; 	<p>control of manufactured medicinal products in the conditions of pharmaceutical organizations;</p> <ul style="list-style-type: none"> • monitor drug quality assurance systems; • provide the process of quality control in pharmaceutical organizations with equipment and consumables. 	<p>the established sample for the control of manufactured drugs in the conditions of pharmaceutical organizations.</p>
4.	PC-7.	Able to carry out operations related to the technological process in the production of medicines and their control	PC-7.5. Monitors the compliance of the raw materials and excipients used with the requirements of regulatory documentation	requirements of regulatory documentation for the raw materials and auxiliary materials used	carry out pharmacopoeial analysis of raw materials and auxiliary materials used	methods of quality control of raw materials and auxiliary materials used

4. Volume of the academic discipline and types of academic work

Total labor intensity of the discipline is 3 CU (108 AH)

Type of educational work	Labor intensity	
	volume in credit units (CU)	volume in academic hours (AH)
Classroom work, including	1.8	66
Lectures (L)	0.4	14
Practicals (P)	1.4	52
Student's individual work (SIW)	1.2	42

Mid-term assessment:		
credit		
TOTAL LABOR CAPACITY	3	108

5. Sections of the academic discipline and competencies that are formed

№	Competence code	Section name of the discipline
1.	UC-1,2 PC-4,7	Elemental analysis of medicinal substances.
2.	UC-1,2 PC-4,7	Optical methods for the analysis of medicinal substances.
3.	UC-1,2 PC-4,7	Chromatographic methods for the analysis of medicinal substances.