

## *Summary of the working program of the academic discipline*

### « Chronopharmacology »

General Educational Program of higher education 33.05.01 Pharmacy

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Department: general and clinical pharmacology \_\_\_\_\_

**1. The purpose of mastering the discipline - participation in the formation of relevant competencies: UC-1 (IUC-1.4), PC-3 (IPC-3.1, IPC-3.2, IPC-3.3)**

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

**2.1.** The discipline refers to the additional part of Block 1 of GEP HE.

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

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

#	Code of competence	Content of the competence (or part of it)	Code and name of the indicator of achievement of competence	As a result of studying the discipline students must:		
				know	be Able to	posess
1	UC-1	able to carry out a critical analysis of problem situations based on a systematic approach, to develop a strategy of actions	IUC 1.4. Develops and substantiates a strategy for solving a problem situation on the basis of systemic and interdisciplinary approaches.	<ul style="list-style-type: none"> <li>• basic concepts of clinical chronopharmacology;</li> <li>• biorhythm factors affecting the pharmacokinetics of medicinal products (drugs);</li> <li>features of pharmacokinetics and pharmacodynamics of medicinal products depending on the biorhythm polymorphism of the population</li> </ul>	<ul style="list-style-type: none"> <li>• analyze the effect of drugs on the totality of their pharmacological properties and the possibility of using drugs for treatment in the future Based on the biorhythm polymorphism of the population</li> </ul>	<ul style="list-style-type: none"> <li>• practical experience in pharmaceutical information and consultation during the release and sale of drugs taking into account the biorhythm polymorphism of the population</li> </ul>
2	PC-3	<u>capable of providing pharmaceutical information and consulting during the release and sale of medicinal products for medical use</u>	IPC-3.1. Provides information and consulting assistance to visitors of a pharmacy organization when choosing medicines IPC-3.2. Informs medical	<ul style="list-style-type: none"> <li>• basic concepts of clinical chronopharmacology;</li> <li>• biorhythm factors affecting the pharmacokinetics of medicinal products (drugs);</li> <li>features of pharmacokinetics and pharmacodynamics</li> </ul>	<ul style="list-style-type: none"> <li>• of the population. the effect of drugs on the totality of their pharmacological properties and the possibility of using drugs for treatment depending on the biorhythm</li> </ul>	<ul style="list-style-type: none"> <li>• practical experience in pharmaceutical information and consultation during the release and sale of drugs taking into account the biorhythm polymorphis</li> </ul>

		professionals about medicines, their synonyms and analogues, possible side effects IPC-3.3. Takes a decision on the replacement of the prescribed medicinal product with synonymous or analogous drugs in the prescribed manner based on information about groups of medicinal products and synonyms within the same international non-patent name	of medicinal products depending on the biorhythm polymorphism	polymorphism of the population	m of the population
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#### 4. Volume of the academic discipline and types of academic work

Total labor intensity of the discipline is 1 CU (36 AH)

Type of educational work	Labor intensity		Labor intensity (AH) in semesters
	volume in credit units (CU)	volume in academic hours (AH)	5 semester
Classroom work, including	<b>0,61</b>	<b>22</b>	<b>22</b>
Lectures (L)	0,17	6	6
Laboratory practicum (LP)*			
Practicals (P)	0,44	16	16
Seminars (S)			
Student's individual work (SIW)	<b>0,39</b>	<b>14</b>	<b>14</b>
Mid-term assessment	Included in the final class structure		
credit			
<b>TOTAL LABOR INTENSITY</b>	<b>1</b>	<b>36</b>	<b>36</b>

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

№	Competence code	Section name of the discipline
1.	<b>UC-1</b> (IUC-1.4), <b>PC-3</b> (IPC-3.1, IPC-3.2, IPC-3.3)	Introduction. Subject and scientific and practical tasks of chronopharmacology.
2.	<b>UC-1</b> (IUC-1.4), <b>PC-3</b> (IPC-3.1, IPC-3.2, IPC-3.3)	Biorhythm factors affecting the pharmacokinetics of drugs
3.	<b>UC-1</b> (IUC-1.4), <b>PC-3</b> (IPC-3.1, IPC-3.2, IPC-3.3)	Biorhythm factors affecting the pharmacodynamics of drugs
4	<b>UC-1</b> (IUC-1.4), <b>PC-3</b> (IPC-3.1, IPC-3.2, IPC-3.3)	Chronopharmacology of psychotropic drugs
5	<b>UC-1</b> (IUC-1.4), <b>PC-3</b> (IPC-3.1, IPC-3.2, IPC-3.3)	Pharmacobiorhythm bases of differentiated use of drugs that affect the functions of the digestive system, regulate metabolic processes, inhibit inflammation and affect immune processes
6	<b>UC-1</b> (IUC-1.4), <b>PC-3</b> (IPC-3.1, IPC-3.2, IPC-3.3)	Pharmacobiorhythm bases of differentiated use of antimicrobial and antiparasitic drugs