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Khanty-Mansiysk Autonomous Okrug-Ugra
 "Surgut State University"

Approved by
 Deputy Rector for Academic Affairs

_____ E.V. Konovalova

11 June 2026, protocol No. 5

Pharmacology Syllabus

Department **Morphology and physiology**
 Curriculum s310501-ЛечДелоИн-25-3.plx
 Specialty 31.05.01 General Medicine
 Qualification **General Practitioner**
 Form of education **Full-time**
 Total (in credits) **7**

Total academic hours 252
 including:
 Classes 144
 Self-study 81
 Control hours 27

Control:
 Exam, 6th term
 Credit, 5th term

Course outline in terms

Academic year (Term)	5 (3.1)		6 (3.2)		Total	
	Weeks					
Weeks	17	2/6	16	4/6		
Types of classes	Cur	Syl	Cur	Syl	Cur	Syl
Lectures	32	32	16	16	48	48
Practical	48	48	48	48	96	96
Total contact	80	80	64	64	144	144
Contact	80	80	64	64	144	144
Self-study	28	28	53	53	81	81
Control hours			27	27	27	27
Total	144	144	108	108	252	252

The Syllabus is compiled by:
Assistant, Yukhnevich Karolina Serafimovna

The Syllabus
Pharmacology

Developed in accordance with Federal State Educational Standard:
Federal State Educational Standard of higher education in the specialty 31.05.01 General medicine (Order of the Ministry of Education and Science of the Russian Federation on 12.08. 2020 № 988

Based on the Curriculum:
31.05.01 GENERAL MEDICINE
Specialization: General Medicine
Approved by the Academic Council of Surgut State University, 11 June 2026, protocol No. 5.

The Syllabus was approved by the department
Morphology and Physiology

Head of Department, Doctor of Medical Sciences, Professor Stolyarov V.V.

1. COURSE OBJECTIVES	
1.1	Formation of students' ability to abstract thinking, analysis, synthesis in the process of competent selection of the most effective and safe medicines; preparation for the medical use of drugs and other substances and their combinations, alertness to unwanted drug reactions and elimination of the consequences of these reactions when solving professional
1.2	Teaching students the methodology of mastering knowledge in pharmacology, analysis of the use of drugs using scientific, reference literature, official statistical reviews, Internet resources and principles of evidence;
1.3	Teaching students the basics of prescription workflow and the rules for writing prescriptions for medicines, storing and using medicines and other substances and their combinations in solving professional problems.

2. COURSE OVERVIEW	
Course code (in curriculum)	B1.O.04
2.1 Assumed background:	
2.1.1	Hominal Physiology
2.1.2	Latin Language
2.1.3	Chemistry
2.2 Post-requisite courses and practice:	
2.2.1	Infectious diseases
2.2.2	Neurology, medical genetics, neurosurgery
2.2.3	Gynaecology
2.2.4	Clinical Pharmacology
2.2.5	Dermatovenereology
2.2.6	Anaesthesiology, Resuscitation, Intensive Care
2.2.7	Outpatient therapy
2.2.8	Faculty Therapy
2.2.9	Obstetrics
2.2.10	Hospital surgery. Pediatric surgery
2.2.11	Urology
2.2.12	Endocrinology

3. COMPETENCES UPON COMPLETION OF THE COURSE (MODULE)	
PC-5.1: Demonstrates knowledge of the mechanisms and methods applied in pharmacotherapy, medical nutrition, medical devices and methods of non-drug treatment, palliative and personalized medical care	
PC-5.4: Demonstrates knowledge of side effects of drugs, methods and duration of their use; assesses the effectiveness and safety of pharmacotherapy, medical nutrition and non-drug treatment, medical nutrition of palliative care	
GPC-7.1: Knows the classification, mechanism of action, pharmacokinetics, pharmacodynamics of drugs used in various fields of medicine; indications and contraindications for their prescription; possible side effects and complications; methods of non-drug therapy, their mechanism of effect, indications and contraindications for prescription to adult patients, possible side effects and complications	
GPC-7.4: Knows the physical principles of various methods and equipment for non-drug treatment and prevention of human diseases with the aim of their effective and differentiated application in the professional activities	

By the end of the course students must:

3.1	Know:
	classification, mechanisms of action, pharmacokinetics, pharmacodynamics of drugs used in various fields of medicine, indications and contraindications for their use, possible side effects and complications, methods of non-drug therapy, taking into account the mechanism of action, indications and contraindications, possible side effects and complications; principles of developing a treatment plan based on an established diagnosis, know the approaches to organizing pharmacotherapy, clinical nutrition, medical devices and methods of non-drug, palliative and personalized treatment, including pregnant women, elderly and senile patients, side effects of drugs, as well as the principles for evaluating the effectiveness and the safety of the therapy; general principles for preparing prescriptions and compiling prescription

3.2	Be able to:
3.2.1	analyze pharmacokinetics and features of pharmacodynamics of drugs; analyze possible side effects and complications, methods of drug and non-drug therapy, taking into account the mechanism of action, indications and contraindications, possible side effects and complications, measures for their prevention and treatment; assess the possibility of developing drug dependence when using the drug; prescribe treatment and monitor its effectiveness and safety; develop a treatment plan (drug, non-drug, palliative) based on the established diagnosis, organize personalized treatment approaches, including for pregnant women, elderly and senile patients, and evaluate the effectiveness and safety of the therapy; write prescriptions for medicines

4. STRUCTURE AND CONTENTS OF THE COURSE (MODULE)

Class Code	Topics /Class type	Term / Academic year	Academic hours	Competences	Literature	Interactive
	Section 1. Introduction to pharmacology. General recipe. The main issues of general pharmacology					
1.1	Patterns of General Pharmacology. Pharmacokinetics. Pharmacodynamics /Lecture/	5	4	GPC-7.1 GPC-7.4 PC 5.1 PC 5.4	L1.1 L1.2 L1.3 L2.3 E1 E4	
1.2	Neurotropic agents /Lec/	5	24	GPC-7.1 GPC-7.4 PC 5.1 PC 5.4	L1.1 L1.2 L1.3 L2.3 E1 E2 E3 E4	
1.3	Medical prescription /Pr/	5	16	GPC-7.1 GPC-7.4 PC 5.1 PC 5.4	L1.1 L1.2 L1.3 L2.3 E1	
1.4	Questions of general pharmacology. Pharmacokinetics. Pharmacodynamics /Pr/	5	2	GPC-7.1 GPC-7.4 PC 5.1 PC 5.4	L1.1 L1.2 L1.3 L2.3 L3.3 L3.5 E1 E4	
1.5	Neurotropic agents /Pr/	5	30	GPC-7.1 GPC-7.4 PC 5.1 PC 5.4	L1.1 L1.2 L1.3 L2.3 L3.3 L3.5 E1 E2 E3 E4	
1.6	Neurotropic agents /Self-study/	5	68	GPC-7.1 GPC-7.4 PC 5.1 PC 5.4	L1.1 L1.2 L1.3 L2.3 L3.3 L3.5 E1 E2 E3 E4	
1.7	General recipe / Test /	5	0	GPC-7.1 GPC-7.4 PC 5.1 PC 5.4	L1.1 L1.2 L1.3 L2.3 L3.3 L3.5 E1 E2 E3 E4	Test: writing prescriptions
1.8	Intermediate certification: an oral test carried out on questions / Test /	5	0	GPC-7.1 GPC-7.4 PC 5.1 PC 5.4	L1.1 L1.2 L1.3 L2.3 L3.3 L3.5 E1 E2 E3 E4	Oral discussion of classes. Prescribing and analyzing situational tasks.
	Section 2. Particular Pharmacology					
2.1	Medications affecting the functions of organs and systems /Lec/	6	12	GPC-7.1 GPC-7.4 PC 5.1 PC 5.4	L1.1 L1.2 L1.3 L2.3 E1 E2 E3 E4	
2.2	Antimicrobial, antiviral and antiparasitic agents. Antineoplastic drug /Lec/	6	10	GPC-7.1 GPC-7.4 PC 5.1 PC 5.4	L1.1 L1.2 L1.3 L2.1 L2.2 L2.3 E1 E2 E3 E4	
2.3	Substances with a predominant effect on tissue metabolism, inflammation and immune processes /Lec/	6	6	GPC-7.1 GPC-7.4 PC 5.1 PC 5.4	L1.1 L1.2 L1.3 L2.3 E1 E2 E3 E4	
2.4	Medications affecting the functions of organs and systems /Pr/	6	18	GPC-7.1 GPC-7.4 PC	L1.1 L1.2 L1.3 L2.3	

				5.1 PC 5.4	L3.1 L3.5 E1 E2 E3 E4	
2.5	Antimicrobial, antiviral and antiparasitic agents. Antitumor agents /Pr/	6	18	GPC-7.1 GPC-7.4 PC 5.1 PC 5.4	L1.1 L1.2 L1.3 L2.1 L2.2 L2.3 L3.2 L3.4 L3.5 E1 E2 E3 E4	
2.6	Substances with a predominant effect on tissue metabolism, inflammation and immune processes /Pr/	6	12	GPC-7.1 GPC-7.4 PC 5.1 PC 5.4	L1.1 L1.2 L1.3 L2.3 L3.2 L3.5 E1 E2 E3 E4	
2.7	Medications affecting the functions of organs and systems /Self-study/	6	2	GPC-7.1 GPC-7.4 PC 5.1 PC 5.4	L1.1 L1.2 L1.3 L2.3 L3.5 E1 E2 E3 E4	
2.8	Antimicrobial, antiviral and antiparasitic agents. Antitumor agents /Self-study/	6	3	GPC-7.1 GPC-7.4 PC 5.1 PC 5.4	L1.1 L1.2 L1.3 L2.1 L2.2 L2.3 L3.4 L3.5 E1 E2 E3 E4	
2.9	Particular Pharmacology /Test/	6	0	GPC-7.1 GPC-7.4 PC 5.1 PC 5.4	L1.1 L1.2 L1.3 L2.3 L3.1 L3.2 L3.4	Test: writing prescriptions
2.10	Intermediate certification: an exam conducted on exam tickets /Exam/	6	27	GPC-7.1 GPC-7.4 PC 5.1 PC 5.4	L1.1 L1.2 L1.3 L2.1 L2.2 L2.3 L3.5 E1 E2 E3 4	An oral survey conducted on examination tickets. Writing prescriptions

5. ASSESSMENT TOOLS

5.1. Assessment tools for midterm assessment

Presented by a single document

5.2. Assessment tools for diagnostic testing

Presented by a single document

6.COURSE (MODULE) RESOURCES

6.1. Recommended Literature

6.1.1. Core

	Authors	Title	Publish., year	Quantity
L 1.1	Kharkevitch, D. A.	Pharmacology: textbook	M .: GEOTAR-Media, 2019, electronic resource	2
L 1.2	Alyautdin R.N.	Pharmacology. Illustrated textbook: учебник	M .: GEOTAR-Media, 2020, electronic resource	2
L 1.3	Kharkevitch D.A.	Pharmacology: textbook	M .: GEOTAR-Media, 2023, electronic resource	2

6.1.2. Supplementary

	Authors	Title	Publish., year	Quantity
L 2.1	Poborskiy A. N.	Lectures on pharmacology. β -lactam antibiotics. Aminoglycosides: text of lectures	Surgut: SurGU Publishing Center, 2012, electronic resource	36
L 2.2	Poborskiy A. N.	Lectures on pharmacology: macrolides. Linkosamides. Tetracyclines. Glycopeptides. Oxazolidinones. Cyclic lipopeptides	Surgut: SurGU Publishing Center, 2015, electronic resource	2
L 2.3	Kharkevitch D.A.	Pharmacology: textbook	M .: GEOTAR-Media,	1

			2008, electronic resource	
6.1.3. Methodical development				
	Authors	Title	Publish., year	Quantity
L 3.1	Poborskiy A. N.	Practical training in pharmacology. Part 2. Means affecting the functions of executive bodies and systems	Surgut: B. and., 1999	95
L 3.2	Poborskiy A. N.	Practical training in pharmacology. Part 3: Means regulating metabolic processes. Means affecting the immune processes. Antimicrobial agents	Surgut: SurGU Publishing House, 2000	14
L 3.3	Poborskiy A. N.	Guide to practical classes in pharmacology: Questions of general pharmacology. Neurotropic drugs	Surgut: SurGU Publishing Center, 2011	81
L 3.4	Poborskiy A. N.	Guide to practical classes in pharmacology: antimicrobial, antiviral and antiparasitic agents	Surgut: SurGU Publishing Center, 2015, electronic resource	2
L 3.5	Poborskiy A. N.	Collection of pharmacological situational tasks	Surgut: SurSU Publishing, 2019, electronic resource	1
6.2. Internet resources				
E 1	Pharmacology, http://www.vidal.ru			
E 2	Pharmacology, http://www.swetswise.com			
E 3	Pharmacology, http://www.scsml.rssi.ru			
E 4	Pharmacology, http://www.rlsnet.ru			
6.3.1 Software				
6.3.1.1	Operational system Microsoft, applied programs pack Microsoft Office			
6.3.2 Information Referral systems				
6.3.2.1	http://www.garant.ru "Garant"			
6.3.2.2	http://www.consultant.ru "Consultant Plus"			
7. MATERIAL AND TECHNICAL SUPPORT OF DISCIPLINE (MODULE)				
7.1	434 auditorium - number of seats - 16; chalk board. Equipped with equipment: tables for all sections of pharmacology; cabinets for working literature and layouts of preparations; LCD TV Trony T-LCD 3200, DVD player Samsung-P370K			