

# AMENDMENTS AND CHANGES TO THE CURRICULUM IN THE EDUCATIONAL DISCIPLINE «PHARMACOLOGY»

for the specialty 1-79 01 08 Pharmacy  
2021/2022 academic year

Amendments and changes	Basis/Reason
1. Changes have been introduced into the thematic plan and educational discipline curricular chart (Appendix 1)	Educational Plan for 2021/2022 academic year
2. The following sections have been added to the information and methodological part: <b>MAIN FORMS OF SUPERVISED STUDENT INDEPENDENT WORK:</b> <ul style="list-style-type: none"> <li>– studying topics and problems that have not been discussed at the lectures;</li> <li>– taking notes of original sources (sections of anthologies, collections of documents, monographs, textbooks);</li> <li>– computer testing;</li> <li>– preparation of tests for the organization of mutual assessment;</li> </ul> <p>Control of supervised student independent work is carried out in the forms of:</p> <ul style="list-style-type: none"> <li>– test paper;</li> <li>– final class, colloquium in the form of an oral interview, written work, testing;</li> <li>– individual interview;</li> </ul>	Educational Plan for 2021/2022 academic year
3. The literature has been updated (Appendix 2)	

The curriculum is revised and approved at the Pharmacology department meeting #. 10 of June 21 2021

Head of the department  
Professor



N.A. Bizunok

APPROVED  
Dean of the Medical Faculty for International Students



O.S. Ishutin

### EDUCATIONAL DISCIPLINE CURRICULAR CHART

Section, topic #	Section (topic) name	number of hours			Self-studies	Equipment	Form of control
		lectures	practical ( <i>laboratory or seminars</i> )	supervised self-study			
<b>1.</b>	<b>Introduction. General prescription</b>	-	-	-	<b>5</b>		
1.1.	<b>Subject of pharmacology. Terminology. Sources and stages of creating medicines. Legislation in the field of medicines</b>	-	-	-	<b>1</b>	e-learning	Interviews, control questions, electronic tests
1.2.	<b>Rules for the formulation of prescriptions for the prescription of drugs in various dosage forms</b>	-	<b>9</b>	-	<b>4</b>	e-learning	Interviews, control questions, electronic tests
<b>2.</b>	<b>General pharmacology</b>	<b>4</b>	<b>12</b>	<b>2</b>	<b>9</b>		
<b>2.1.</b>	<b>Pharmacokinetics of drugs</b>	<b>2,67</b>	<b>6</b>	<b>1,33</b>	<b>3</b>		
2.1.1.	Fundamentals of pharmacokinetics. Principles of dosing of drugs	1,33	3	0,67	2	e-learning	Interviews, control questions, electronic tests
2.1.2.	Biotransformation and excretion of drugs. Correction of the dosage regimen of drugs with a change in clearance and volume of distribution	1,33	3	0,67	1	e-learning	Interviews, control questions, electronic tests
<b>2.2.</b>	<b>Pharmacodynamics of drugs</b>	<b>1,33</b>	<b>3</b>	<b>0,67</b>	<b>2</b>	e-learning	Interviews, control questions, electronic tests
<b>2.3.</b>	<b>Final lesson on «General prescription. General pharmacology»</b>	-	<b>3</b>	-	<b>4</b>	e-learning	Interviews, control questions, electronic tests
<b>3.</b>	<b>Special pharmacology</b>						
<b>3.10.</b>	<b>Chemotherapeutic drugs</b>	<b>10,67</b>	<b>33</b>	<b>5,33</b>	<b>39</b>		
3.10.1.	Bacterial cellular wall synthesis inhibitors	2,67	6	1,33	6	e-learning	Interviews, control questions, electronic tests
3.10.2.	Inhibitors of microbial protein synthesis	1,33	3	0,67	4	e-learning	Interviews, control questions, electronic tests

3.10.3.	Inhibitors of RNA synthesis	1,33	6	0,67	4	e-learning	Interviews, control questions, electronic tests
3.10.4.	Antimycobacterial drugs	1,33	3	0,67	4	e-learning	Interviews, control questions, electronic tests
3.10.5.	Antifungal drugs	1,33	3	0,67	4	e-learning	Interviews, control questions, electronic tests
3.10.6..	Antiviral drugs	1,33	3	0,67	4	e-learning	Interviews, control questions, electronic tests
3.10.7	Antiprotozoal drugs	-	3	-	4	e-learning	Interviews, control questions, electronic tests
3.10.8.	Antihelmintic drugs	-		-	2	e-learning	Interviews, control questions, electronic tests
3.10.9.	Antiseptics and disinfectants	-	-	-	4	e-learning	Interviews, control questions, electronic tests
3.10.10.	Anticancer drugs	1,33	3	0,67	3	e-learning	Interviews, control questions, electronic tests
3.10.11.	<b>Final lesson on</b> «Chemotherapeutic drugs»	-	3	-	6	e-learning	Interviews, control questions, electronic tests
<b>3.1.</b>	<b>Drugs affecting peripheral nervous system</b>	<b>2,67</b>	<b>20</b>	<b>1,33</b>	<b>6</b>		
3.1.1.	Cholinergic drugs	1,33	8	0,67	2	e-learning	Interviews, control questions, electronic tests
3.1.2.	Adrenergic drugs	1,33	8	0,67	2	e-learning	Interviews, control questions, electronic tests
3.1.3.	Drugs affecting afferent nerves endings. <b>Final lesson on</b> «Drugs affecting peripheral nervous system»		4	-	2	e-learning	Interviews, control questions, electronic tests
<b>3.2.</b>	<b>Drugs affecting the central nervous system</b>	<b>9,33</b>	<b>28</b>	<b>4,67</b>	<b>16</b>		
3.2.1.	General anesthetics. Ethyl alcohol	1,33	4	0,67	2	e-learning	Interviews, control questions, electronic tests
3.2.2.	Analgetic drugs	1,33	4	0,67	2	e-learning	Interviews, control questions, electronic tests
3.2.3.	Anticonvulsants	1,33	4	0,67		e-learning	Interviews, control questions, electronic tests
3.2.4.	Antiparkinsonian drugs	-	1	-	2	e-learning	Interviews, control questions, electronic tests

3.2.5.	Anxiolytic and sedative-hypnogenic drugs	1,33	4	0,67	2	e-learning	Interviews, control questions, electronic tests
3.2.6.	Antipsychotic drugs	1,33	4	0,67	2	e-learning	Interviews, control questions, electronic tests
3.2.7.	Antidepressants, normothymic drugs. Psychostimulants, nootropic drugs.	1,33	3	0,67	2	e-learning	Interviews, control questions, electronic tests
3.2.8.	General anesthetics. Ethyl alcohol	1,33	3	0,67	2	e-learning	Interviews, control questions, electronic tests
3.2.9.	<b>Colloquium</b>	-	1	-	2	e-learning	Interviews, control questions, electronic tests
<b>3.5.</b>	<b>Hormons</b>	<b>6,67</b>	<b>28</b>	<b>3,33</b>	<b>40</b>		
3.5.1.	Hypothalamic and pituitary hormones	1,33	2	0,67	2	e-learning	Interviews, control questions, electronic tests
3.5.2.	Thyroid and antithyroid hormone drugs	-	2	-	2	e-learning	Interviews, control questions, electronic tests
3.5.4.	Pancreatic hormones and antidiabetic drugs	1,33	4	0,67	2	e-learning	Interviews, control questions, electronic tests
<b>3.4.</b>	<b>Vitamin drugs</b>	-	<b>2</b>	-	-	e-learning	Interviews, control questions, electronic tests
<b>3.12.</b>	<b>Various pharmaceutical products (biologically active supplements, phytopreparations, etc.)</b>	1,33	2	0,67	-	e-learning	Interviews, control questions, electronic tests
3.5.3.	Regulators of calcium homeostasis	-	1	-	6	e-learning	Interviews, control questions, electronic tests
3.5.6.	Sex hormones, their analogues and antagonists	-	3	-	6	e-learning	Interviews, control questions, electronic tests
3.5.5.	Adrenocortical hormone drugs	-	4	-	6	e-learning	Interviews, control questions, electronic tests
3.7.	Anti-inflammatory drugs	1,33	3	0,67	4	e-learning	Interviews, control questions, electronic tests
3.8.	Anti-gout drugs	1,33	1	0,67	4	e-learning	Interviews, control questions, electronic tests
3.9.	Immunomodulating drugs	1,33	8	0,67	8	e-learning	Interviews, control questions, electronic tests
<b>3.3.</b>	<b>Drugs affecting the functions of effector organs and systems</b>						

3.3.1.	Diuretic drugs	-	4	-	4	e-learning	Interviews, control questions, electronic tests
<b>3.3.2.</b>	<b>Drugs affecting cardio-vascular system</b>					e-learning	Interviews, control questions, electronic tests
3.3.2.1.	Antihypertensive drugs	1,33	4	0,67	4	e-learning	Interviews, control questions, electronic tests
3.3.2.2.	Antianginal and other antiischemic drugs	1,33	3	0,67	4	e-learning	Interviews, control questions, electronic tests
<b>3.6.</b>	<b>Hypolipidemic drugs</b>	<b>1,33</b>	<b>1</b>	<b>0,67</b>	<b>4</b>	e-learning	Interviews, control questions, electronic tests
3.3.2.3.	Drugs used for the treatment of heart failure	1,33	4	0,67	4	e-learning	Interviews, control questions, electronic tests
3.3.2.4.	Antiarrhythmic drugs	1,33	4	0,67	4	e-learning	Interviews, control questions, electronic tests
3.3.3.	<b>Final lesson on «Drugs affecting the cardiovascular system and kidney renal function»</b>	-	4	-	4	e-learning	Interviews, control questions, electronic tests
3.3.4.	Drugs affecting blood system	2,67	8	1,33	6	e-learning	Interviews, control questions, electronic tests
3.3.6.	Drugs affecting the respiratory system	1,33	4	0,67	4	e-learning	Interviews, control questions, electronic tests
3.3.5.	Drugs affecting the gastrointestinal tract	2,67	8	1,33	8	e-learning	Interviews, control questions, electronic tests
<b>3.14.</b>	<b>Principles of the treatment of acute drug poisoning. Emergency aid drugs</b>	<b>1,33</b>	<b>2</b>	<b>0,67</b>	<b>4</b>	e-learning	Interviews, control questions, electronic tests
<b>3.11.</b>	<b>Drug-to-drug interaction</b>	-	2	-	4	e-learning	Interviews, control questions, electronic tests
<b>3.13.</b>	<b>Homeopathic remedies</b>	-	-	-	2	e-learning	Interviews, control questions, electronic tests
	<b>Total hours</b>	<b>49</b>	<b>182</b>	<b>25</b>	<b>171</b>		

## List of academic discipline literature recommended for 2021-2021 academic year


*Main*

1. *Kharkevitch D.A.* Pharmacology: textbook for medical students.– 2nd ed., rev.and suppl. – Moscow: GEOTAR-Media Publishing Group, 2017. – 680 p. – Translation of Russian textbook «Pharmacology» 2017.
2. *Alyautdin, R. N.* Pharmacology: workbook. Part 1 / R. N. Alyautdin. ; ed.by V. P. Fisenko; engl. ed. by I.Yu. Markovina. Moscow : Geotar-Media, 2010. 256 p.

*Additional*

3. *Katzung, B.G.* Basic and Clinical Pharmacology / B.G. Katzung, A.J.. Trevor. 14th ed. New York: McGraw-Hill Medical, 2017. 1264 p.
4. *Trevor A.G.* Katzung & Trevor's Pharmacology Examination and Board Review / A.G. Trevor, B.G. Katzung, M. Knudering-Hall. 11th ed. New York: McGraw-Hill Medical, 2015. 592 p.
5. *Brunton L.L.* Goodman & Gilman's The Pharmacological basis of Therapeutics / L.L. Brunton, B. Knollman, R. Hilal-Dandan. – 13th ed. – McGraw-Hill, 2017. 1440 p.
6. *Bennett, P. N.* Clinical Pharmacology / P. N. Bennett, M. J. Brown. 9th ed. Churchill Livingstone, 2003. 804 p.
7. *Brenner, G. M.* Pharmacology / G. M. Brenner, C. M. Stevens. 3rd ed. Philadelphia : Saunders Elsevier, 2010.
8. *Rang and Dale's Pharmacology.* / H. P. Rang [et al.]. 7th ed. Edinburgh : Elsevier, Churchill Livingstone, 2012. 777 p.
9. *Larner, J.* Brody's Human Pharmacology / J. Larner, T. H. Brody, K. P. Minneman. Molecular to Clinical. 4th ed. Philadelphia : Elsevier Mosby, 2005. 775 p.
10. *Gardenhire D. S.* Rau's Respiratory Care Pharmacology. 7th ed. Saint Louis : Mosby, 2007. 544 p.
11. *Craig, C. R.* Modern Pharmacology with Clinical Applications / C. R. Craig, R. E. Stitzel. 6th ed. Lippincott Williams & Wilkins. 832 p.
12. *AHFS Drug Information.* – Bethesda, MD : American Society of Health-System Pharmacists, 2012.
13. *Briggs, G. G.* Drugs in Pregnancy & Lactation : A Reference Guide to Fetal and Neonatal Risk / G. G. Briggs, R. K. Freeman, S. J. Yaffe 6th ed. Philadelphia : Lippincott Williams & Wilkins, 2011. 1595 p.
14. *Merck Index : An Encyclopedia of Chemicals, Drugs, and Biologicals.* 14th ed. Whitehouse Station, NJ : Merck Research Laboratories, 2006.
15. *Physicians' Desk Reference.* 65th ed. Montvale, NJ : Thomson PDR, 2011.
16. *Baxter, K.* Stockley's drug interactions : a source book of interactions, their mechanisms, clinical importance, and management. 9th ed. London : Pharmaceutical Press, 2010. 1792 p.
17. *Волчек, А. В.* Pharmacology Tests for the specialty "General Medicine" / А. В. Волчек. Н. А. Бизунок, Б. В. Дубовик, А. В. Шелухина. – БГМУ. – 2020. – 107 с.

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