



Educational Institution
"Royal Metropolitan University"

Quality Management System
Syllabus of the discipline "Basic Pharmacology"
Specialty 560001 "General Medicine" EI "RMU"

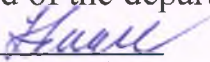
Educational Institution "Royal Metropolitan University"
Department "Morphological and Fundamental disciplines"

SYLLABUS
in the discipline "**Basic Pharmacology**"
for students of specialty **560001 "General Medicine"**

Form of study	full-time
Course	2
Semester	3,4
Zachet	3
Exam	4
Total credits according to the curriculum	8
Total hours according to the curriculum	240
Lectures	72
Practical classes	72
Independent work	96

Syllabus developer:
Niazova B.N.

Reviewed and approved at a meeting of the
department of "Morphological and
Fundamental disciplines"
Protocol No. 1 from "9" September 2024.
Head of the department PhD Jalilova A.A.


(signature)

Bishkek 2024



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SYLLABUS

1. General information

№		
1	Teacher:	Niiazova Begaim Nurbekovna
2	Phone number	+996554058576
3	E-mail	niiazovabegaiym@gmail.com
4	Speciality	"General medicine" – Medical doctor
5	Department	Morphological and Fundamental Disciplines
6	Academic year	2024-2025
7	Semester	3 rd and 4 th
8	Classroom	413/414
9	Discipline	«Basic Pharmacology»
10	Credits	8

2. The Description of Discipline

1.	The description of discipline	Basic pharmacology is the foundational study of how drugs interact with the body. It involves understanding the effects of drugs, their mechanisms of action, how they are absorbed, distributed, metabolized, and excreted (pharmacokinetics), and how they produce therapeutic or toxic effects (pharmacodynamics). Basic pharmacology also includes the study of drug classifications, dosage forms, side effects, and the relationship between drug dose and response. In essence, it provides essential knowledge about the biological effects of drugs and their clinical applications.
2.	The goal of discipline	Studying of classifications of medicines, formation at students of skill of competent selection. The most effective and safe medicines according to their pharmacodynamic and pharmacokinetic characteristics, drug interactions; alertness to undesirable drug reactions for a given pathology and elimination of the consequences of these reactions; training of students in the methodology of mastering knowledge on pharmacology using scientific, reference literature, official statistical surveys, Internet resources and evidence-based principles; basics prescription document circulation and rules for writing prescriptions for medicines; Special attention is given to the formular system, the international nonproprietary (generic) namemedicines
3	Prerequisites	Knowledge of Medical Biology, Biochemistry, Normal Physiology, Latin language/
4	Postrequisites	Pathological Physiology, Pathological Anatomy, Pharmacology, General Hygiene, Infectious diseases.
5	Results disciplines' studying	1. 1. General pharmacology, the concept of pharmacodynamics: the basic principles of the action of drugs, the concept of




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specific receptors, agonists and antagonists, pharmacological effects. Kinds action of medicines: local, resorptive, reflex; pharmacokinetics of drugs: factors affecting the pharmacokinetics of medicinal products means. Physicochemical properties of drugs, the importance of lipophilicity, polarity, the degree of dissociation, the concept of bioavailability, the processes of absorption, distribution, communication with proteins, volume of distribution, metabolism and excretion of drugs; types of doses: average and highest therapeutic dose, single, daily, course, toxic doses, latitude therapeutic action; international non-proprietary names of medicines; types of dosage forms (solid, soft, liquid); general principles of prescription and preparation of prescription medicines; use of the Latin language; Common abbreviations and symbols; rules for storing and prescribing medicines; international non-proprietary names of medicinal products; the main side effects of drugs; side effects of allergic and non-allergic nature, idiosyncrasy, toxic effects of drugs, teratogenicity, embryotoxicity.

2. classification of drugs that affect the functions of peripheral and central nervous systems, the mechanism of action and pharmacological effects of these agents, indications for use and major side effects. Classification of medicines affecting the function of executive bodies and processes tissue exchange, mechanism of action and pharmacological effects, indications for use and basic side effects; classification of anti-inflammatory, antiallergic, chemotherapeutic and immunotropic drugs, the mechanism of action and pharmacological effects, indications for use and the main side effects of the groups; sources of medical information about medicines; design of clinical research, classification of research; Methodological tools of pharmacoepidemiology as the basis for obtaining information on use, efficacy and safety of drugs, theoretical bases of drug statistics and methods of theoretical and experimental, clinical, pharmacoepidemiological and pharmacoeconomic studies.
3. types of pharmacotherapy, the goals of the treatment; types of drug interactions; classification of side effects by type, the Naranjo scale; principles of rational use of medicines; principles for selecting medicines for rational use of medicines, criteria for their selection; principles of informing, instructing, warning about the use of medicines; principles of monitoring the effectiveness and safety of pharmacotherapy

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4. Name and volume of discipline

Course	Semester	Weeks	Total academic hours		Number of hours for independent work		Total hours	Number of modules
			Lecture	Practical classes	SIW	SIWT		
3	3	18	36	36	48	48	120	2
	4	18	36	36	48	48	120	2

4. Thematic plan of 3rd semester, modules, hours, weeks, dates


Plan of the discipline	Lecture/ practice classes	Topic	Date	Hours
Section 2. General pharmacology				
1 week	Lecture	Introduction to pharmacology. History pharmacology. Problems of modern pharmacology	02.09.24 07.09.24	2
	Practice class	Definition of pharmacology. History of pharmacology. Problems of modern pharmacology. Prescription, Part prescription.		2
2 week	Lecture	General pharmacology: pharmacokinetics: basic principles, parameters part 1	09.09.24 – 14.09.24	2
	Practice class	General pharmacology: pharmacokinetics: basic principles, parameters		2
3 week	Lecture	General pharmacology: pharmacokinetics: basic principles, parameters part 2	16.09.24 – 21.09.24	2
	Practice class	General pharmacology: pharmacokinetics: basic principles, parameters part 2		2
4 week	Lecture	General pharmacology: pharmacodynamics: basic principles, parameters	23.09.24- 28.09.24	2
	Practice class	General pharmacology: pharmacodynamics: basic principles, parameters.		2



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5 week	Lecture	Side effects of drugs.	30.09.24- 5.10.24	2
	Practice class	Side effects of drugs.	30.09.24- 5.10.24	2
Section 2. Drugs, affecting peripheral nervous system				
6 week	Lecture	Drugs, affecting afferent innervation	07.10.24 – 12.10.24	2
	Practice class	Drugs, affecting afferent innervation: local anesthetics, demulcents, adsorbents, astringent, irritating drugs.	07.10.24 – 12.10.24	2
7 week	Lecture	Cholinergic drugs (1- part).	14.10.24- 19.10.24	2
	Practice class	Cholinergic drugs (1- part). Classification of drug effecting on cholinergic synapse.		2
8 week	Lecture	Cholinergic drugs (2- part).	14.10.24- 19.10.24	2
	Practice class	Cholinergic drugs (1- part).		2
9 week	Lecture	Adrenergic drugs (1 -part)	21.10.24- 26.10.24	2
	Practice class	Adrenergic drugs (1 -part)		2
10 week	Lecture	Adrenergic drugs 2 -part)	28.10.24 – 02.11.24	2
	Practice class	Adrenergic drugs (2 -part)		2
11 week	Lecture	« Drugs, affecting peripheral nervous system»	04.11.24 – 09.11.24	2
	Practice class	« Drugs, affecting peripheral nervous system»		2
12 week	Lecture	General anesthetics	11.11.24- 16.11.24	2
	Practice class	General anesthetics		2
13 week	Lecture	Ethanol. Sedative - hypnotics	18.11.24 – 23.11.24	2
	Practice class	Ethanol. Sedative - hypnotics		2
14 week	Lecture	Antiseizure drugs. Antiparkinson drugs	25.11.24 – 30.11.24	2
	Practice class	Antiseizure drugs. Antiparkinson drugs		2
15 week	Lecture	Analgesics	01.12.24 – 06.12.24	2
	Practice class	Analgesics		2
16 week	Lecture	Central nervous system depressants		2

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	Practice class	Central nervous system depressants	08.12.24 – 13.12.24	2
17 week	Lecture	Central nervous system stimulants	29.12.24 – 03.01.25	2
	Practice class	Central nervous system stimulants		2
18 week	Lecture	Central nervous system stimulants Neuroleptics, Litium salts	29.12.24 – 03.01.25	2
	Practice class	Central nervous system stimulants Neuroleptics, Litium salts		2
Module 2				72 h

4. Thematic plan of 4th semester, modules, hours, weeks, dates


Plan of the discipline	Lecture/ practice classes	Topic	Date	Hours
Section 4. Drugs, affecting cardiovascular system				
1 week	Lecture	Cardiotonic drugs	27.01.24 – 01.02.25	2
	Practice class	Cardiotonic drugs		2
2 week	Lecture	Antianginal drugs. Lipid -lowering drugs.	03.02.25 – 08.02.25	2
	Practice class	Antianginal drugs. Lipid -lowering drugs.		2
3 week	Lecture	Antihypertensive drugs	10.02.25 – 15.02.25	2
	Practice class	Antihypertensive drugs		2
Section 6. Drugs, affecting function of executive bodies and processes of tissue metabolism				
4 week	Lecture	Drugs, affecting the respiratory system	24.02.25 - 01.03.25	2
	Practice class	Drugs, affecting the respiratory system		2
5 week	Lecture	Drugs, affecting the digestive system	03.03.25 - 08.03.25	2
	Practice class	Drugs, affecting the digestive system		2
6 week	Lecture	Diuretics. Drugs, reducing the content in the body uric acid. Drugs, affecting on the tone of the myometrium.	10.03.25 – 15.03.25	2



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	Practice class	Diuretics. Drugs, reducing the content in the body uric acid. Drugs, affecting on the tone of the myometrium.	10.03.25 – 15.03.25	2
7 week	Lecture	Drugs, affecting the blood system	17.03.25 – 22.03.25	2
	Practice class	Drugs, affecting the blood system	17.03.25 – 22.03.25	2
8 week	Lecture	Hormonal preparations, and their synthetic analogues, antagonists	24.03.25 – 29.03.25	2
	Practice class	Hormonal preparations, and their synthetic analogues, antagonists		2
9 week	Lecture	Vitamins, Drugs effecting micro-microelemens.	24.03.25 – 29.03.25	2
	Practice class	Vitamins, Drugs effecting micro-microelemens.		2
Section 5. Anti -inflammatory, antiallergic, chemotherapeutic and immunotropic drugs				
10 week	Lecture	Anti -inflammatory medicines	31.03.25 – 05.04.25	2
	Practice class	Anti -inflammatory medicines		2
11 week	Lecture	Antiallergic medicine	07.04.25 – 12.04.25	
	Practice class	Antiallergic medicine		
12 week	Lecture	Principles of chemotherapy. Antiseptic and disinfecting drugs	14.04.25- 19.04.25	2
	Practice class	Principles of chemotherapy. Antiseptic and disinfecting drugs		2
13 week	Lecture	Antibiotics (b -lactam antibiotics)	21.04.25 - 26.04.25	2
	Practice class	Antibiotics (b -lactam antibiotics)		2
14 week	Lecture	Antibacterial drugs of different chemical structure	28.04.25 – 03.05.25	2
	Practice class	Antibacterial drugs of different chemical structure		2
15 week	Lecture	Antituberculous drugs		2
	Practice class	Antituberculous drugs		2

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			05.05.25 – 10.05.25	
16 week	Lecture	Antiviral drugs	12.05.25 – 17.05.25	2
	Practice class	Antiviral drugs		2
17 week	Lecture	Anti -spirochetes and antifungal drugs	19.05.25 – 24.05.25	2
	Practice class	Anti -spirochetes and antifungal drugs		2
18 week	Lecture	Anti -protozoa drugs,Anthelmintic drugs	26.05.25 – 31.05.25	2
	Practice class	Anti -protozoa drugs,Anthelmintic drugs		2
Module 2				72 h

5. Schedule of consultation


Semester	Group	Day	Time	Classroom
3	GM-1-6	Friday	10-00 -11-30	413
4	GM -1	Thursday	10-00 -11-30	413

6. Detention schedule

Semester	Group	Day	Time	Classroom
3	GM-1-6	Thursday	10-00 -11-30	413
4	GM -1	Thursday	10-00 -11-30	413

7. Literature

1. Lippincott Pharmacology 2014 <https://mediccenter.com/download-allpharmacology-pdfbooks-free-preview/>
2. B. Katzung Basic And Clinical Pharmacology 2021 <https://mediccenter.com/basic-and-clinicalpharmacology-bykatzung-new-14thedition-pdf-freedownload/>
3. Goodman and Gilman's The Pharmacological Basis Of Therapeutics 13th Edition, 2021 2021 <https://mediccenter.com/goodman-andgilman-pharmacology>

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A list of additional literature:

1. • Lippincott Pharmacology 2014 <https://medicscenter.com/download-allpharmacology-pdfbooks-free-preview/>
2. B. Katzung Basic And Clinical Pharmacology 2021 <https://medicscenter.com/basic-and-clinicalpharmacology-bykatzung-new-14thedition-pdf-freedownload/>
3. Goodman and Gilman's The Pharmacological Basis Of Therapeutics 13th Edition, 2021 2021 <https://medicscenter.com/goodman-andgilman-pharmacology>
4. Formulary of Kyrgyzstan 2024, Formulary of Pakistan.

8. Monitoring and evaluation of learning outcomes

Scoring Policy	Module 1	Module 2
Classroom work (activity in discussions, oral questioning)	40 points	40 points
Independent work	20 points	20 points
Report, etc.	40 points	40 points
Total per module:	100 points	100 points

Scales of correspondence between grades and scores for final exam	
Scores	Valuation
0- 59	«unsatisfactory»
60 – 74	«satisfactory»
75 – 89	«good»
90 – 100	«excellent»

9. Academic discipline policy (Student code ethics):

- Mandatory class attendance.
- Activity on lessons, home task preparing
- Qualified SSW.
- Presence and availability on modules

Additional requirements:

a/ one lateness to the class or leaving it before the end is counted as one missed lesson, and must be reworked;

б/ unacceptable the use of cellphones during classes, late submissions of assignments, not to comply rules of conduct

Help: For consultation on SSW, for additional information on lectures and practice classes topics please, contact the teacher during hours allocated for reworks and consultation