



Educational Institution
"Royal Metropolitan University"

Quality Management System
Syllabus of the discipline "Basic Pharmacology"
Specialty 560004 "Dentistry" EI "RMU"

**Educational Institution "Royal Metropolitan University"
department "Morphological and Fundamental disciplines"**

SYLLABUS
in the discipline "Basic Pharmacology"
for students of specialty 560004 "Dentistry"

Form of study	full-time
Course	3
Semester	5
Exam	5
Total credits according to the curriculum	2
Total hours according to the curriculum	60
Lectures	18
Practical classes	18
Independent work	24

Syllabus developer:
Niiazova B/

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)



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Teacher: Niiazova Begaim

TEЛ: +996554058576 (WhatsApp)

e- mail: begaiymniiazova@gmail.com

Title and labor intensity of the discipline

Course	Semester	Weeks	Total academic hours		Number of hours for independent work		Total hours	Number of modules
			Lecture	Practical classes	SIW	SIWT		
3	5	18	18	18	12	12	60	2

1. 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) named medicines
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. General pharmacology, the concept of pharmacodynamics: the basic principles of the action of drugs, the concept of 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



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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.

1. 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 pharmaco-economic studies.
2. 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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3. Name and volume of discipline

№	Name of discipline	Course	Semester	Duration in weeks	Number of credits	Time of academic hours		Time for Self studying work		Total time (hours)
						Lectures (hours)	Practice classes (hours)	SIW	SIWT	
1	Basic Pharmacology	3	5	18	2	18	18	12	12	60

4. Thematic plan of 5th semester, modules, hours, weeks, dates

Plan of the discipline	Lecture/ practice classes	Topic	Hours
1-2 week	Lecture	Introduction to pharmacology. History pharmacology. Problems of modern pharmacology	2
	Practice class	Definition of pharmacology. History of pharmacology. Problems of modern pharmacology. Prescription, Part prescription.	2
3-4 week	Lecture	General pharmacology: pharmacokinetics, pharmacodynamics	2
	Practice class	General pharmacology: pharmacokinetics, pharmacodynamics	2
5-6 week	Lecture	Side effects of drugs	2
	Practice class	Side effects of drugs	2
7-8 week	Lecture	Drugs, affecting afferent innervation: local anesthetics, demulcents, adsorbents, astringent, irritating drugs.	2
	Practice class	Drugs, affecting afferent innervation: local anesthetics, demulcents, adsorbents, astringent, irritating drugs.	2
8-9 week	Lecture	Cholinergic drugs. Classification of drug effecting on cholinergic synapse.	2
	Practice class	Cholinergic drugs . Classification of drug effecting on cholinergic synapse.	2
10-11 week	Lecture	Adrenergic drugs (1 -part)	2
	Practice class	Adrenergic drugs (1 -part)	2
12-13 week	Lecture	General anesthetics	2
	Practice class	General anesthetics	2
14-15 week	Lecture	Ethanol. Sedative – hypnotics. Antiseizure drugs. Antiparkinson drugs	2

	Educational Institution "Royal Metropolitan University"
	Quality Management System Syllabus of the discipline "Basic Pharmacology" Specialty 560004 "Dentistry" EI "RMU"

	Practice class	Ethanol. Sedative – hypnotics. Antiseizure drugs. Antiparkinson drugs	2
16-17 week	Lecture	Analgesics	2
	Practice class	Analgesics	2
17-18 week	Lecture	Central nervous system depressants and stimulants	2
	Practice class	Central nervous system depressants and stimulants	2
Module 2			36 h

5. Schedule of consultation

Semester	Group	Day	Time	Classroom
5	1	Friday	10-00 -11-30	413

6. 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>

A list of additional 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>
4. Formulary of Kyrgyzstan 2024, Formulary of Pakistan.

7. Monitoring and evaluation of learning outcomes

Scoring Criteria	Module 1
Classroom work (activity in discussions, oral questioning, working with a glossary, lectures, completing assignments, etc.)	40 points
Independent work: essay, report, etc	20 points
Total for the module (testing, situational task)	40 points
Total for the discipline	100 points



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Scales of correspondence between grades and scores for final exam

Scores	Valuation
0- 59	«unsatisfactory»
60 – 74	«satisfactory»
75 – 89	«good»
90 – 100	«excellent»

8. 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;

b/ 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

Monitoring and evaluation of learning outcomes

Each module is assessed using a 100-point system. The maximum score is 100. A student is allowed to take the final test if he has a total score in the discipline of 60 points or more.

Scoring Criteria	Module 1	Module 2
Classroom work (activity in discussions, oral questioning, working with a glossary, lectures, completing assignments, etc.)	40 points	40 points
Independent work: essay, report, etc	20 points	20 points
Total for the module (testing, situational task)	40 points	40 points
Total for the discipline	100 points	

Evaluation criteria:

Criteria for assessing the practical class:

- "Excellent" rating awarded to the student if he has knowledge of the discipline in the full scope of the program and comprehends the discipline deeply enough; independently, in a logical sequence and exhaustively answers all questions, emphasizing the most essential, is able to analyze, compare, classify, generalize, concretize and systematize the studied material, highlight the main thing in it;
- rating "good" the student has knowledge of the discipline almost to the full extent of the program (there are knowledge gaps only in some sections); independently and partly with leading questions, gives complete answers to the ticket questions;



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does not always highlight the most significant, but at the same time does not make serious mistakes in the answers;

- rating "satisfactory" is given in cases where the student has basic knowledge in the discipline; shows difficulty in answering independently, uses imprecise formulations; in the process of answering, errors are made regarding the substance of the questions;

- rating "unsatisfactory" is given in cases where the student has not mastered the required minimum knowledge of the subject and is unable to answer the questions on the ticket even with additional leading questions from the teacher.

Criteria for evaluating practical skills:

- Rated "*excellent*" is determined through a thorough and systematic conduct of all stages of the neurological examination. Having clear and professional communication with the patient during the examination. The student has a thorough understanding of the neurological aspects being studied, including the analysis of specific symptoms and their interpretation.

- Rated "*good*" graded by competently performing the basic steps of a neurological examination and interacting effectively with the patient to ensure understanding and trust. With the ability to identify the main neurological symptoms and conduct appropriate analysis.

- Rating "*satisfactory*" is set when performing the main stages of a neurological examination, but with some shortcomings, with some misunderstandings or failures in communication with the patient. With basic knowledge of neurological symptoms and their interpretation.

- Rating "*unsatisfactory*" awarded if the student makes serious errors or omissions in conducting a neurological examination, as well as if there are problems in communication that may cause difficulties or even dissatisfaction in the patient and insufficient knowledge of neurological aspects and their identification during the examination.

Criteria for evaluating SIW/SIWT:

- rating "*excellent*" awarded to the student if the topic of the essay is fully disclosed, excellent mastery of the material is demonstrated, appropriate sources are used in the right quantity, the structure of the work corresponds to the assigned tasks, the degree of independence of the work is high;

- rating "*good*" awarded to the student if the topic of the essay is basically covered, good mastery of the material is demonstrated, appropriate sources are used, the structure of the work generally corresponds to the assigned tasks, the degree of independence is average;

- rating "*satisfactory*" awarded to the student if the topic of the essay is poorly covered, satisfactory mastery of the material is demonstrated, the sources used and



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the structure of the work partially corresponds to the assigned tasks, the degree of independence of the work is low;

- rating "*unsatisfactory*" assigned to the student if the topic of the essay is not covered, poor mastery of the material is demonstrated, the sources used are insufficient, the structure of the work does not correspond to the assigned tasks, the work is not independent.

Project evaluation criteria:

- "Excellent" rating awarded to students if the project demonstrates outstanding depth of exploration of the neurological aspects of the topic while presenting innovative research approaches. Effective public education emphasizes creativity and originality of the project, as well as active community involvement. The organization and structure of the project is highly organized, logically structured, ideas are clearly and professionally expressed

- a "good" grade is given to students if the project demonstrates a good depth of research into neurological aspects, supported by specific facts and data. The effectiveness of education is significant, but there is room for further improvement. The presence of creative elements gives the project originality, but some aspects may require additional development. Community involvement is positive but can be more intense. The organization and structure of the project is generally good, but some areas may require improvement.

-rating "satisfactory" awarded to students if the project meets the minimum requirements for research in neurological aspects, but requires additional development. The effectiveness of education is at a basic level and the project can be improved in this area. The project contains elements of creativity, but they can be supplemented and deepened. Community involvement could be more active. The organization and structure of the project needs additional attention to improve clarity and consistency.

- an "unsatisfactory" grade is given to students; the project does not meet basic standards and does not provide sufficient depth in the study of the neurological aspects of tuberculosis. The effectiveness of education is extremely limited, creativity and originality are lacking. Community involvement is insufficient or absent. The organization and structure of the project raises serious concerns, making it difficult to understand and disorganized.

MCQ Evaluation Criteria:

- "*excellent*" rating on testing is awarded to the student who provides correct, deep and clear answers, demonstrating a high level of knowledge and their practical application. Important factors are the student's ability to solve complex problems, be creative, and comply with test requirements. Criteria may vary, but the general requirement is outstanding understanding and successful application of course



material (if the number of correct answers is 90 or more)

- rating "good" on testing is given to a student if he has demonstrated good knowledge of the subject, provided correct answers, clearly and clearly expressed his thoughts, and also successfully coped with the main aspects of the test tasks. This score may also reflect the student's ability to apply acquired knowledge in a variety of situations and effectively use the learned skills in test tasks (if the number of correct answers is from 76 to 89)

- rating "satisfactory" on testing is awarded to a student who demonstrates a basic understanding of the subject matter, provides answers that meet the minimum requirements, and successfully completes the main elements of the test. This score may indicate that the student has mastered the basics of the material, but may not have achieved a high level of depth of knowledge or was unable to cope with more complex aspects of the assignments (with the number of correct answers from 60 to 75)

- rating "unsatisfactory" on testing is given to a student if his knowledge of the subject is insufficient, the answers contain significant errors or do not meet the minimum requirements, and also if the student has not coped with the main aspects of the test. This score indicates an unsatisfactory level of mastery of the material and an inability to apply knowledge within the framework of test tasks (if he gave up to 59 correct answers inclusive)

Scale of correspondence between grades and points on the final control (exam)

Points	Grade
90-100	excellent
76-89	good
60-75	satisfactorily
0-59	unsatisfactory

Academic discipline policy:

- compulsory attendance at classes;
- active participation of the student in practical classes;
- preliminary preparation and completion of homework;
- high-quality and timely completion of tasks under SIW;
- participation in all types of control (current, milestone, final);
- one lateness to classes and/or leaving before their end for any reason is considered as one missed lesson that cannot be restored;
- unacceptable: the use of cell phones during classes, deception and plagiarism, late submission of assignments, failure to comply with chain of command and rules of conduct.



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Assist: For consultations on completing independent work their delivery and defense, as well as for additional information on the material covered and all other questions that arise regarding the course being taught, please contact the teacher during the hours allocated for SIW.