

ANNOTATION
work program of the academic discipline
"Pharmacology"

Speciality	05/31/01 "Medicine"
Number of credits	In accordance with the RUP
Interim certification form	Test/Exam

1. The purpose of studying the discipline

The goal of mastering the discipline of pharmacology is to develop in students the ability to competently select the most effective and safe drugs based on their pharmacodynamic and pharmacokinetic characteristics, drug interactions, as well as to train students in the methodology of mastering knowledge in pharmacology using scientific, reference literature, official statistics reviews, Internet resources and principles of evidence, the basics of prescription document flow and rules for writing prescriptions for drugs, storing and using drugs.

2. Summary of the discipline

Section 1. *Introduction to pharmacology. General recipe. General pharmacology.*

Definition of the subject, purpose and objectives of pharmacology. Principles of classification of drugs. Principles of research and testing of new drugs. State registration of medicines. State control over the use of medicines. Recipe, its structure. Prescription forms. Recipe rules. State Pharmacopoeia. The concept of the rules for prescription and over-the-counter drug dispensing. Rules for storage and use of medicines.

Determination of pharmacokinetics. Basic pharmacokinetic parameters, their practical significance for the development of optimal dosage regimens for drugs.

Determination of pharmacodynamics. Main targets of drug action. Types of internal activity, agonists and antagonists. Types of action of drugs. Pharmacological effects (main, side, toxic).

Section 2. *Neurotropic agents.*

Drugs acting on cholinergic synapses M-cholinomimetic drugs. M, N-cholinomimetic agents. Anticholinesterase drugs. M-anticholinergic drugs. N-anticholinergic drugs.

Drugs acting on adrenergic synapses. Adrenergic agonists. Sympathomimetics Adrenergic blocking agents. Sympatholytic agents.

Section 3. *Medicines affecting the central nervous system.* Anesthetics (general anesthetics). Ethanol. Sleeping pills. Antiepileptic drugs and antiparkinsonian drugs Painkillers (analgesics)

Opioid (narcotic) analgesics. Non-opioid (non-narcotic) analgesics. Analgesics with a mixed mechanism of action (opioid-non-opioid).

Psychotropic drugs. Antipsychotics (neuroleptics). Antidepressants. Remedies for the treatment of mania. Anxiolytics (tranquilizers). Sedatives. Psychostimulants. Nootropic drugs.

Consequences of uncontrolled use of potent, psychoactive and narcotic drugs.

Section 4. *Medicines affecting the functions of executive organs and systems*

Medicines affecting the cardiovascular system. Inotropic, antianginal, antiarrhythmic drugs. Drugs for the treatment of hypertension. Diuretics

Medicines that affect the function of the respiratory system. Bronchodilators. Respiratory analeptics. Antitussives and expectorants

Medicines that affect the function of the digestive system. Drugs that affect the secretory function of the stomach.

Medicines that affect the contractile function of the myometrium. Medicines that affect the blood system. Antithrombic and hemostatic agents. Drugs affecting erythro- and leukopoiesis.

Section 5. *Medicines that regulate metabolic processes. Facilities, inhibiting inflammation and influencing immune processes.*

Preparations of hormones, their synthetic substitutes and antagonists. Preparations of insulin and synthetic hypoglycemic agents. Glucocorticoid preparations: classification of drugs. anti-inflammatory and antiallergic effect

Preparations of water- and fat-soluble vitamins. Steroidal and non-steroidal anti-inflammatory drugs Antiallergic drugs and immunomodulatory drugs.

Section 6. *Antimicrobial and antiparasitic agents. Antitumor facilities.*

Principles of rational chemotherapy.

Antibiotics. Classification according to chemical structure, spectrum and type of action. Synthetic antimicrobial agents. Classification.

Antiviral and antifungal agents. Antiprotozoal agents.

Antitumor agents.