

**FACULTY OF MEDICINE, UNIVERSITY OF NIŠ****Study program: MEDICINE****Course: Pharmacology with toxicology****Semester: Fifth****Study year: Third****CURRICULUM – THEORETICAL LECTURES – FIRST SEMESTER 2021/22.**

Week	Subject	Teacher	Nr. of classes:
1.	Aims in pharmacology studies and research Definitions of a drug and a poison Drug application methods		3
2.	Basic principles of pharmacokinetics (absorption, distribution, metabolism and excretion of drugs)		3
3.	Factors influencing drug effects (physiological, pathological, drug interactions), enzyme induction and inhibition Drug elimination from the body Pharmacokinetic and pharmacodynamic interactions		3
4.	Pharmacodynamics Mechanisms of drug action, basic principles (interaction and binding to other molecules, proteins, nucleic acids and lipids) Receptors (introduction, structure and classification) Agonists and antagonists (binding to receptors and signal transduction, ion channels, enzymes), drug-receptor interaction, dose-dependent curve, affinity, selectivity		3
5.	Chemical and biophysical mechanism of drug action Factors influencing pharmacodynamic drug actions Tolerance and drug dependence, adverse effects, toxicity, therapeutic index, allergic reactions to drugs, iatrogenic diseases Modulation of receptor activity, desensitization, tachyphylaxis, hypersensitivity		3
6.	Neurotransmission in autonomic nervous system		3
7.	Cholinergic and anticholinergic drugs (muscarinic agonists and antagonists, nicotinic agonists and antagonists, indirect cholinomimetics, clinical use and adverse effects)		3
8.	Adrenergic and antiadrenergic drugs Ganglion blockers (adrenergic agonists and antagonists, clinical use and adverse effects)		3

9.	Pharmacology of histaminergic transmission (introduction, classification, receptor tissue distribution, receptors, agonists and antagonists, clinical use and adverse effects) Pharmacology of GABAergic transmission Drugs in sleep disorders and anxiety treatment, benzodiazepines and barbiturates (clinical use, adverse effects, abuse) Pharmacology of dopaminergic transmission (introduction, classification, receptor tissue distribution, receptors, agonists and antagonists) Antipsychotics Pharmacology of serotonergic and noradrenergic transmission Drugs in treatment of depression and mood disorders, lithium, drugs in treatment of bipolar psychosis Drugs in treatment of epilepsy, parkinsonism, movement disorders and Huntington disease		3
10.	Intravenous and inhalatory general anesthetics (mechanism of action, clinical use, adverse effects)		3
11.	Local anesthetics (mechanism of action, relationship between structure and effect, use with adrenergic agonists – vasoconstriction, clinical use, adverse effects) Myorelaxants Alcohol		3
12.	Methylxantines Opioid analgesics (mechanism of action, clinical use, adverse effects) Pharmacology of leucotrienes and prostaglandins		3
13.	Nonsteroidal anti-inflammatory drugs (mechanism of action, clinical use, adverse effects) Anti-inflammatory steroidal drugs (mechanism of action, clinical use, adverse effects)		3
14.	Theoretical classes consultations		3
15.	Theoretical classes consultations		3

**CURRICULUM – PRACTICAL LECTURES – FIRST SEMESTER 2021/22.**

Week	Subject	Teacher	Nr. of classes:
1.	Introduction to pharmacology, definition of a drug, drug names and classifications, drug prescription types, sources of drug information, ATC classification		2
2.	Solid drug dose forms		2
3.	Liquid drug dose forms		2
4.	Semi-solid drug dose forms		2
5.	Pharmacokinetics		2
6.	Pharmacodynamics		2
7.	Tolerance, tachyphylaxis, drug dependence		2
8.	Adverse drug effects, basics of pharmacovigilance		2
9.	Pharmacology of antipsychotics, antidepressants and anxiolytics		2
10.	General and local anesthesia		2
11.	Analgesics		2
12.	Cholinergic and anticholinergic drugs, pharmacotherapy of glaucoma, insecticide poisoning		2

13.	Adrenergic and antiadrenergic drugs, pharmacotherapy of bronchial asthma		2
14.	Students` seminars		2
15.	Students` seminars		2

**FACULTY OF MEDICINE, UNIVERSITY OF NIŠ**

**Study program: MEDICINE**

**Course: Pharmacology with toxicology**

**Semester: Sixth**

**Study year: Third**

**CURRICULUM – THEORETICAL LECTURES – SECOND SEMESTER 2021/22.**

Week	Subject	Teacher	Nr. of classes:
1.	Clinical pharmacology of drugs in treatment of cardiovascular disorders: Drugs in treatment of heart failure Pharmacotherapy of myocardial ischemia Drugs in treatment of arterial hypertension		2
2.	Diuretics Antiarrhythmics		2
3.	Therapy of peripheral vascular disease Drugs in treatment of hyperlipidemia and atherosclerosis		2
4.	Pharmacology of blood: Blood coagulation Drugs affecting coagulation (vitamin K and anticoagulants) Antiplatelet drugs Fibrinolytic drugs and hemostatics Antianemic drugs		2
5.	Agents for fluid replacement Pharmacotherapy of acid/base and electrolyte imbalance Pharmacotherapy of vitamins (A, D, E, C, B1, B2, B6, nicotinic acid)		2
6.	Pharmacology of respiratory tract (oxygen, expectorants, antitussives) Immunosuppressants (clinical use)		2
7.	Pharmacology of digestive tract: Drugs in treatment of peptic ulcer Digestives Appetite stimulants and depressors Laxatives Pharmacotherapy of constipation Antiemetics		2
8.	Pharmacology of hormones: Thyroid hormones and antithyroid drugs Pharmacotherapy of diabetes mellitus		2
9.	Adrenocortical hormones Estrogens and gestagens Androgens and anabolic steroids Hormones of hypothalamus and hypophysis Parathyroid hormones		2

10.	Antimicrobial therapy: Mechanism of action Basic principles of rational use Spectrum of effect Drug resistance Clinical use and adverse effects		2
11.	Antimicrobial therapy: Penicillins Cephalosporins Aminoglycosides		2
12.	Chemotherapy of tuberculosis Tetracyclines Macrolides and reserve antibiotics Lincomycin and antibiotics for local use Sulfonamides Urinary tract antiseptics		2
13.	Antifungal drugs Antiviral drugs Antimalaric and amebicide drugs Anthelmintic drugs Antiseptics and disinfectants		2
14.	Chemotherapy of cancer Toxicology: Principles and poisoning treatment Poisoning with mercury, lead, arsenic, pesticides and war poisons, carbon monoxide, hydrocarbons and hydrogen cyanide Caustic and corrosive poisons		2
15.	Theoretical classes consultations		2

**CURRICULUM – PRACTICAL LECTURES – SECOND SEMESTER 2021/22.**

Week	Subject	Teacher	Nr. of classes:
1.	Antihypertensive drugs, treatment of arterial hypertension and hypertensive crisis		2
2.	Calcium channel antagonists, vasodilators, antiischemic drugs Treatment of stable angina pectoris		2
3.	Diuretics, ACE inhibitors, drugs in treatment of heart failure		2
4.	Antiarrhythmics, treatment of atrial fibrillation		2
5.	Coagulants and anticoagulants, fibrinolytic and antiplatelet drugs		2
6.	Treatment of anemias and peptic ulcer		2
7.	Treatment of diabetes mellitus		2
8.	Pharmacology of thyroid gland Corticosteroids Oral contraceptives		2
9.	Mechanism of antibiotic action and general principles of antibiotic therapy		2
10.	Summary of antibiotics by groups		2
11.	Students` seminars		2
12.	Students` seminars		2

13.	Drug prescription and parts of a drug prescription Prescribing solid drug dose forms		2
14.	Prescribing semi-solid drug dose forms		2
15.	Prescribing liquid drug dose forms		2

**Head of the Department of Pharmacology with Toxicology**

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