
Course title: PHARMACOLOGY AND TOXICOLOGY 1/3

ECTS credit allocation (and other scores): 3

Semester: spring

Level of study: ISCED-7 - second-cycle programmes (EQF-7)

Branch of science: Medical and health sciences

Language: English

Number of hours per semester: 30

Course coordinator/ Department and e-mail: Department of Pharmacology and Toxicology
lukasz.puchala@uwm.edu.pl,

Type of classes: classes and lectures

Substantive content

CLASSES: Pharmacology basics. Pharmacokinetics: Basics pharmacokinetics Basics pharmacodynamics. Receptors for drugs. Agonists and antagonists. Pharmacodynamic drug interactions.

Drugs affecting the autonomic nervous system. Eicosanoids, histamine, serotonin.

Antibiotics Concepts in antibiotic pharmacology. Bacteriostatic vs Bacteriocidal antibiotics

Mechanism of Action of antibiotics. Characteristics of specific groups of antibiotics. Antiviral drugs. Antifungal drugs

Antiparasitic drugs classification Disinfectants, antiseptics, sterilants.

LECTURES: Pharmacokinetics: Basics pharmacokinetics - routes of administration, processes of absorption, distribution, metabolism and excretion. pharmacokinetic parameters: half-life, volume of distribution, drug clearance, drug interactions therapeutic monitoring of drugs. Basics pharmacodynamics. Receptors for drugs. Agonists and antagonists. Pharmacodynamic drug interactions. Introduction to pharmacology of ANS. Drugs stimulating cholinergic receptors and cholinesterase inhibitors. Drugs blocking cholinergic receptors. Drugs acting non-directly. Adrenergic agonists. Adrenergic antagonists.

Learning purpose: The basic aim in the pharmacology and toxicology teaching is learning and understanding by students mechanisms of drug action, adverse and toxic effects and possible interactions which can occur during polytherapy. Special attention is given to pharmacotherapy's safety and efficient drug use in a therapy of particular diseases.

On completion of the study programme the graduate will gain:

Knowledge: The student knows the mechanisms of action of drugs, side effects, toxicity, and potential interactions.

Skills: Student is able to use the appropriate sources of information about the drug, indicates the benefits and risks associated with the use of known drugs

Social Competencies: Students directs the good of the patient, placing them in the first place. Respects the medical confidentiality and patient rights. It is aware of his own limitations and the ability to lifelong learning.

Basic literature:

1) Rang H.P., Dale M.M., Ritter J.M., Flower R., Pharmacology 2015 ;

2) Katzung B.G., Trevor A.J., Basic&Clinical Pharmacology, wyd. McGrawHill 2015

Supplementary literature:

The allocated number of ECTS points consists of: 3

Contact hours with an academic teacher: 42

Student's independent work: 33