

Course title: CLINICAL PHARMACOLOGY

ECTS credit allocation (and other scores): 2

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: Łukasz Smyk, Department of Pharmacology and Toxicology, lukasz.smyk@gmail.com

Type of classes: classes

Substantive content

CLASSES:

1. Clinical pharmacology – definition, goal, tasks and it's importance in clinical practice. The influence of drugs on the results of laboratory tests. Pharmacoeconomics
2. Side effects of drugs. Drug interactions.
3. Pharmacokinetics changes of drugs caused by pathological conditions (pharmacotherapy in patients with kidney dysfunction). Pharmacotherapy during pregnancy and breastfeeding.
4. Pharmacotherapy of cancer. Pharmaceutics used in rheumatology. Principles of biologic therapy.
5. Pharmacological principles of brain stroke treatment. Anticoagulation therapy.
6. Pharmacotherapy in endocrinology. Pharmacotherapy of diabetes mellitus.
7. Pharmacotherapy of bacterial infections. Principles of antibiotic therapy. Therapy of bronchial asthma and COPD (clinical scenarios)
8. Drug used in gastroenterology and liver dysfunction. - Pharmacotherapy of gastrointestinal symptoms and peptic ulcer disease - treatment of acute chronic hepatitis C and B infection (clinical scenarios)
9. Pharmacotherapy of diseases in the practice of a cardiologist (clinical scenarios) – ischemic heart disease - arrhythmias - acute and chronic heart failure
10. Pharmacotherapy in family doctor's practice. Modern Pharmacotherapy of pain (clinical scenarios)

LECTURES:

Learning purpose: The primary goal of clinical pharmacology course is to link pharmacological knowledge with clinical practice. It is important for students to understand aspects of drug use with regard to their efficiency and safety. Clinical scenarios will allow students to acquire practical skills related to pharmacotherapy. After completing the course, the student should know the general concepts and issues of clinical pharmacology, the principles of drugs and gain practical knowledge of drug groups in terms of mechanisms of action, clinical effects, fate in human

organism, indications and contraindications of therapy, side effects, interactions and dosage. He gains knowledge of pharmacotherapy of basic cardiovascular, respiratory, nervous, gastro intestinal, endocrine diseases as well as systemic diseases and sensory organs.

On completion of the study program the graduate will gain:

Knowledge: The student is able to describe the types of pharmacokinetic processes, clinical consequences of genetic changes in drug kinetics, clinical criteria, types of drug interactions, benefits associated with the conduct of monitored therapy and factors determining the occurrence of drug complications. He has knowledge in the treatment of cardiovascular, respiratory, nervous, gastrointestinal, endocrine diseases, principles of modern diabetes therapy, pain pharmacotherapy and the basics of antibiotic therapy.

Skills: The student makes simple pharmacokinetic calculations, is able to correct drug doses in pathological situations (liver and kidney failure), designs schemes of rational pharmacotherapy, uses pharmaceutical guides and databases of medicinal products.

Social Competencies: The student is aware of the fact that many pharmaceuticals appear on the market, many of which have uncertain or harmful effects. He understands that the result of improper use of drugs may result with hospitalization due to drug complications and the costs of treatment of side effects are charged to hospitals' budgets.

Basic literature: Bertram G. Katzung, „Basic and Clinical Pharmacology 15th Edition McGraw-Hill Medical., Published: November 14, 2020

Supplementary literature:-

The allocated number of ECTS points consists of: 2

Contact hours with an academic teacher: lukasz.smyk@gmail.com

Student's independent work:

- conducting a pharmacological consultation based on the presented clinical cases. - 2 h.
- identification of potential drug interactions - 2 h.
- getting acknowledged with the didactic materials presented before the classes. - 10 h.
- preparation of a briefing or summary of an article on a selected topic - 4 h.

Sumarized: 18 h.