



## Course syllabus - part A Clinical Pharmacology

**48SJ-CLP**  
**ECTS: 2.00**  
**CYCLE: 2023Z**

### SUBJECT MATTER CONTENT

#### CLASSES

1) Clinical pharmacology - definition, goals, tasks, and its importance in clinical practice. Effects of drugs on laboratory tests. 2) Drug interactions. Elements of pharmacogenetics. Side effects of drugs 3) Impaired drugs kinetics in pathological conditions. Pharmacotherapy in neonates, infants, children, and the elderly. Drug treatment in pregnancy and during lactation. 4) Neoplasm pharmacotherapy. Pharmaceuticals used in rheumatology 5) Pharmacological principles of brain stroke treatment. Anticoagulative therapy 6) Pharmacotherapy in Endocrinology, Pharmacotherapy of Diabetes mellites 7) Therapy of bronchial Asthma and COPD. Treatment of allergic reactions, Principles of hospital antybioticotherapy. 8) Pharmaceuticals used in Gastroenterology and Hepatology. 9) Cardiovascular system: Pharmacotherapy - of an acute and chronic heart failure - of an acute and chronic coronary syndrome - of arrhythmias (clinical scenarios) 10) Pharmacotherapy of most typical diseases in General Practitioner practice. Treatment of pain. Principles of ambulatory pharmacotherapy (clinical scenarios)

#### TEACHING OBJECTIVE

The primary goal of teaching clinical pharmacology is to link pharmacological knowledge with clinical knowledge. Students need to understand the aspects of drug use efficacy and safety. Clinical scenarios will provide practical skills related to pharmacotherapy. After taking the course, the student should be familiar with general concepts and issues in clinical pharmacology. Principles of drug action and a working knowledge of drug groups in terms of mechanisms of action, clinical effects, fate in the body, indications, contraindications, side effects, adverse effects, interactions, and dosage principles. Knowledge of pharmacotherapy of primary diseases of the cardiovascular, respiratory, nervous, gastrointestinal endocrine, systemic and sensory organs.

#### DESCRIPTION OF THE LEARNING OUTCOMES OF THE COURSE IN RELATION TO THE DESCRIPTION OF THE CHARACTERISTICS OF THE SECOND LEVEL LEARNING OUTCOMES FOR QUALIFICATIONS AT LEVELS 6-8 OF THE POLISH QUALIFICATION FRAMEWORK IN RELATION TO THE SCIENTIFIC DISCIPLINES AND THE EFFECTS FOR FIELDS OF STUDY:

**Symbols for outcomes related to the discipline:**

M/NMA\_P7S\_UW+++ , M/NM+++

**Symbols for outcomes related to the field of study:**

M/NM\_C.W.40.+ , C.U17.+ , M/NM\_E.W10.+ , M/NM\_K.11.+ , E.U19.+ , M/NM\_E.W27.+ , C.U19.+ , M/NM\_E.W43.+ , K.2.+ , C.U14.+ , D.U3.+ , E.U33.+ , C.U18.+ , M/NM\_E.W28.+ , K.3.+ , M/NM\_C.W.36.+ , K.1.+ , M/NM\_C.W.38.+ , E.U34.+ , M/NM\_C.W41.+ , C.U15.+ ,

**Legal acts specifying learning outcomes:** 3112022, 672/2020  
**Disciplines:** medical sciences  
**Status of the course:** Obligatoryjny  
**Group of courses:** B - przedmioty kierunkowe  
**Code:** ISCED 0912  
**Field of study:** Medicine, Medicine  
**Scope of education:**  
**Profile of education:** General academic  
**Form of studies:** full-time  
**Level of studies:** uniform master's studies  
**Year/semester:** 5/9

**Types of classes:** Classes  
**Number of hours in semester:** Classes: 30.00  
**Language of instruction:** English  
**Introductory subject:** General Pharmacology  
Toxicology  
**Prerequisites:** Physiology, Biochemistry and knowledge of pharmacology and toxicology

**Name of the organisational unit conducting the course:** Katedra Farmakologii i Toksykologii  
**Person responsible for the realization of the course:** dr n. med. Krzysztof Nosek, lek. Łukasz Smyk  
**e-mail:** lukasz.smyk@uwm.edu.pl

**Additional remarks:**

## **LEARNING OUTCOMES:**

### **Knowledge:**

W1 - The student can discuss the types of pharmacokinetic processes, clinical implications of genetic alterations of drug kinetics, clinical criteria, types of drug interactions, benefits of conducting therapy monitored, and factors determining the occurrence of drug complications. He knows the treatment of diseases, including cardiovascular, respiratory, nervous, gastrointestinal, and endocrine disorders, principles of modern diabetes therapy, pharmacotherapy of pain, and basics of antibiotic treatment.

### **Skills:**

U1 - The student performs simple pharmacokinetic calculations, can select drugs in appropriate doses to correct pathological phenomena in the body and individual organs, restores drug doses in pathological situations (e.g., hepatic and renal failure), designs schemes of rational pharmacotherapy, prepares records of all prescription forms of medicinal substances; uses pharmaceutical guides and databases of medicinal products, performs analysis of possible adverse reactions of individual drugs and interactions between them. He can propose individualizing applicable therapeutic guidelines and other treatment methods in the face of ineffectiveness or contraindications to standard therapy, recognize symptoms of drug dependence and propose therapeutic management, interpret pharmaceutical characteristics of medicinal products and critically evaluate advertising materials on drugs.

### **Social competence:**

K1 - The student is aware of the fact that numerous pharmaceuticals appear on the market, many of which have uncertain or harmful effects. He understands that the result of improper use of drugs is the hospitalization of patients with drug complications and the costs of treating adverse reactions burden hospital budgets. Uses objective sources of information and is aware of the responsibility associated with decisions made in the course of professional activities, including in terms of the safety of himself and others. Is guided by the welfare of the patient.

## **TEACHING FORMS AND METHODS:**

Classes(W1;U1;K1);Practical training

## **FORM AND CONDITIONS OF VERIFYING LEARNING**

### **OUTCOMES:**

Classes (Colloquium test) - Single-choice test. -

### **BASIC LITERATURE:**

1. Bertram G. Katzung, *Farmakologia ogólna i kliniczna*, Tom 1,2, Wyd. wyd. McGraw-Hill Medical, R. 2012

### **SUPPLEMENTARY LITERATURE:**

## Detailed description of ECTS credits awarded - part B

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### Clinical Pharmacology

The number of ECTS credits awarded consists of:

1. Contact hours with the academic teacher:

- participation in: Classes	30.0 h
- consultation	2.0
	Total: 32.0 h.

2. Independent work of a student:

2.00 h  
2.00 h  
4.00 h  
10.00 h

Total: 18.0 h

contact hours + independent work of a student Total: 50.0 h

1 ECTS credit = 25-30 h of an average student's work, number of ECTS credit = 50.0 h : 25.0 h/ECTS = 2.00 ECTS on average: 2.0 ECTS

- including the number of ECTS credits for contact hours with the direct participation of an academic teacher: 0,00 ECTS points,

- including the number of ECTS credits for hours of independent work of a student: