# DESCRIPTION OF THE COURSE OF STUDY

| Course code | 0912-7LEK-C5.12-CK | |
|---|---|---|
| **Name of the course in** | Polish | **Farmakologia kliniczna** |
| | English | **Clinical pharmacology** |

## 1. LOCATION OF THE COURSE OF STUDY WITHIN THE SYSTEM OF STUDIES

| | |
|---|---|
| **1.1. Field of study** | medical |
| **1.2. Mode of study** | Full-time |
| **1.3. Level of study** | Uniform Master's studies |
| **1.4. Profile of study*** | practical |
| **1.5. Specialization*** | Lack |
| **1.6. Unit running the course of study** | Faculty of Medicine and Health Sciences |
| **1.7. Person/s preparing the course description** | dr hab. n. med. Ewa Orlewska, prof UJK |
| **1.8. Person responsible for the course of study** | dr hab. n. med. Ewa Orlewska, prof UJK |
| **1.9. Contact** | ewa.orlewska@ujk.edu.pl |

## 2. GENERAL CHARACTERISTICS OF THE COURSE OF STUDY

| | |
|---|---|
| **2.1. Affiliation with the module** | Non-surgical clinical sciences |
| **2.2. Language of instruction** | English |
| **2.3. Semesters in which the course of study is offered** | 8$^{th}$ semester |
| **2.4. Prerequisites*** | Pharmacology and toxicology |

## 3. DETAILED CHARACTERISTICS OF THE COURSE OF STUDY

| **3.1. Form of classes** | | Lectures: 20h; classes: 25h |
|---|---|---|
| **3.2. Place of classes** | | Lectures and classes – courses in teaching rooms of the UJK |
| **3.3. Form of assessment** | | Written final exam; classes – test. |
| **3.4. Teaching methods** | | Conversational lecture, discussion, case study. |
| **3.5. Bibliography** | **Required reading** | 1. „Basic and clinical pharmacology" 14th Ed. B.C. Katzung 2017 published by McGraw Hill Education Lange<br>2. "Brenner and Steven's pharmacology", G. M. Brenner and C. Stevens 5th Ed. (2017) Elsevier |
| | **Further reading** | 3. Lippincott's Illustrated Reviews: Pharmacology", 6th Ed. (2014), Wolters Kluwer<br>4. "Goodman and Gilman's The Pharmacology Basis of Therapeutics" 13th Ed. (2017) Brunton et al., McGraw Hill |

## 4. OBJECTIVES, SYLLABUS CONTENT AND INTENDED TEACHING OUTCOMES

**4.1. Course objectives** *(including form of classes: lecture, classes)*

The aim of the course of clinical pharmacology is teaching medical students about fundamentals of clinical pharmacology as a translational scientific discipline focused on rational drug development and utilization. The course provides: introductory review of pharmacokinetics, drug metabolism, pharmacogenetics, adverse events monitoring, pharmacotherapy in special populations, drug discovery and development. After completing this program the students should be able to: 1) solve the therapeutical problems, 2) individualize the therapy according to the needs of particular patient and 3) critically assess professional publications

**4.2. Detailed syllabus** *(including form of classes)*

Lectures
1. Pharmacoeconomics
2. Good clinical practice. Ethical aspects of clinical trials
3. Clinical trials of drugs.
4. Pharmacogenetics and pharmacogenomics

5. Personalized medicine
6. Adverse drug reactions, including consequences of drug interactions
7. Changes of drug actions due to abnormal pharmacokinetics in disease
8. Impact of environmental factors and circadian rhythm on drug action
9. Individualisation of pharmacotherapy in children and elderly
10. Optimization of pharmacotherapy in pregnant women

Classes
11. Pharmacovigilance
12. Basic pharmacokinetic calculations
13. Therapeutic drug monitoring
14. Analysis of Summary of Product Characteristics; critical assessment of information about drugs
15. Pharmacotherapy of specific systems (cardiovascular, respiratory, gastro-intestinal, CNS)
16. Effective and safe pain management
17. Rational chemotherapy

## 4.3. Education outcomes in the discipline

| Code | A student, who passed the course | Relation to teaching outcomes |
|---|---|---|
| within the scope of **KNOWLEDGE:** | | |
| W01 | Knows and understands the basic principles of pharmacotherapy of diseases | E.W10. |
| W02 | Lists indications for the implementing of monitoring therapy | E.W40. |
| W03 | Defines basic pharmacoeconomic concepts | E.W41. |
| within the scope of **ABILITIES:** | | |
| U01 | Conducts analysis of the potential side effects of each drug and the interaction between them | E.U17. |
| U02 | Proposes individualization of existing guidelines and other therapeutic treatments in the case of non-effectiveness or contraindications to a standard therapy | E.U18. |
| U03 | Interprets descriptions of pharmaceutical medicines and critically assesses advertising materials relating to medicines | E.U31. |

## 4.4. Methods of assessment of the intended teaching outcomes

| Teaching outcomes | Method of assessment | |
|---|---|---|
| | Test | |
| | Form of classes | |
| | | |
| W01-W03 | + | + |
| U01-U03 | + | + |

## 4.5. Criteria of assessment of the intended teaching outcomes

| Form of classes | Grade | Criterion of assessment |
|---|---|---|
| lecture (L) | 3 | achievement 61-68% of the total number of points possible to obtain |
| | 3,5 | achievement 69-76% of the total number of points possible to obtain |
| | 4 | achievement 77-84% of the total number of points possible to obtain |
| | 4,5 | achievement 85-92% of the total number of points possible to obtain |
| | 5 | achievement 93-100% of the total number of points possible to obtain |
| classes (C)* | 3 | achievement 61-68% of the total number of points possible to obtain |
| | 3,5 | achievement 69-76% of the total number of points possible to obtain |
| | 4 | achievement 77-84% of the total number of points possible to obtain |
| | 4,5 | achievement 85-92% of the total number of points possible to obtain |
| | 5 | achievement 93-100% of the total number of points possible to obtain |

## 5. BALANCE OF ECTS CREDITS – STUDENT'S WORK INPUT

| Category | Student's workload |
| --- | --- |
| | Full-time studies |
| *NUMBER OF HOURS WITH THE DIRECT PARTICIPATION OF THE TEACHER /CONTACT HOURS/* | **45** |
| *Participation in lectures** | **20** |
| *Participation in classes, seminars, laboratories** | **25** |
| *Preparation in the exam/ final test** | |
| *Others** | |
| *INDEPENDENT WORK OF THE STUDENT/NON-CONTACT HOURS/* | **20** |
| *Preparation for the lecture** | **5** |
| *Preparation for the classes, seminars, laboratories** | **10** |
| *Preparation for the exam/test** | **5** |
| *Gathering materials for the project/Internet query** | |
| *Preparation of multimedia presentation* | |
| *Others** | |
| *TOTAL NUMBER OF HOURS* | **65** |
| ECTS credits for the course of study | **3** |

***Accepted for execution*** *(date and signatures of the teachers running the course in the given academic year)*


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