



Syllabus for academic year: 2021/2022													
Training cycle: 2018/2019-2023/2024													
Description of the course													
Course	Clinical Pharmacology								Group of detailed education results				
									Group code	Group name			
									E	Non-surgical clinical sciences			
Faculty	Faculty of Medicine												
Major	medicine												
Level of studies	<input checked="" type="checkbox"/> X uniform magister studies <input type="checkbox"/> 1 st degree studies <input type="checkbox"/> 2 nd degree studies <input type="checkbox"/> 3 rd degree studies <input type="checkbox"/> postgraduate studies												
Form of studies	<input checked="" type="checkbox"/> X full-time <input type="checkbox"/> part-time												
Year of studies	IV							Semester:	<input type="checkbox"/> winter <input checked="" type="checkbox"/> X summer				
Type of course	<input checked="" type="checkbox"/> X obligatory <input type="checkbox"/> limited choice <input type="checkbox"/> free choice / optional												
Language of study	<input type="checkbox"/> Polish <input checked="" type="checkbox"/> X English												
Number of hours													
Form of education													
	Lectures (L)	Seminars (SE)	Auditorium classes (AC)	Major Classes – not clinical (MC)	Clinical Classes (CC)	Laboratory Classes (LC)	Classes in Simulated Conditions (CSC)	Practical Classes with Patient (PCP)	Foreign language Course (FLC)	Physical Education (PE)	Vocational Practice (VP)	Directed Self-Study (DSS)	E-learning (EL)
Winter semester:													
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(Dep. in charge of the course)													
Direct (contact) education ¹													
Distance learning ²													
Summer semester:													
Department of Clinical Pharmacology (Dep. in charge of the course)													
Direct (contact) education				15									

¹ Education conducted with direct participation of university teachers or other academics

² Education with applied methods and techniques for distance learning



Distance learning	5												
TOTAL per year:													
Department of Clinical Pharmacology (Dep. in charge of the course)													
Direct (contact) education			15										
Distance learning	5												
Educational objectives (max. 6 items)													
C1. Equip the student with the knowledge and skills to recognize, interpret, and respond to risks associated with pharmacotherapy and implement methods to increase its efficacy and safety, including rationalization of analgesic and antibiotic therapy.													
C2. Acquire the ability to interpret drug information materials.													
C3. Equip the student with the knowledge and skills of clinical and economic health technology assessment.													
C4. Development social competences needed to practice the medical profession, in accordance with graduate's profile.													
Education result for course in relation to verification methods of the intended education result and the type of class:													
Number of detailed education result	Student who completes the course knows/is able to			Methods of verification of intended education results	Form of didactic class <i>*enter the abbreviation</i>								
E.W10.	Knows the basic principles of pharmacotherapy of diseases affecting the elderly;			MCQ test	L								
E.W29.	Knows principles of pain treatment, including neoplastic and chronic pain;			MCQ test	L								
E.W42.	Knows the indications for implementing monitored therapy;			MCQ test	MC								
E.W43.	Knows the basic pharmacoeconomic terminology;			MCQ test	L								
E.U17.	Can conduct an analysis of possible adverse reactions to and interactions between individual drug;			implementation of the commissioned task, MCQ test	MC								
E.U18.	Can propose individualisation of existing therapeutic guidelines and other methods of treatment in the event of ineffectiveness or contraindications to standard therapy;			implementation of the commissioned task, MCQ test	MC								
E.U19.	Can recognise symptoms of drug dependence and suggest therapeutic management;			implementation of the commissioned task, MCQ test	MC								
E.U31.	Can interpret the pharmaceutical characteristics of medicinal products and critically evaluate advertising material for medicines;			implementation of the commissioned task, MCQ test	MC								
E.U33.	Can implement basic medical treatment for acute poisoning;			implementation of the commissioned task, MCQ test	MC								
E.U34.	Can monitor the condition of a patient poisoned by chemicals or drugs			implementation of the commissioned task, MCQ test	MC								
* L- lecture; SE- seminar; AC- auditorium classes; MC- major classes (non-clinical); CC- clinical classes; LC- laboratory classes; CSC- classes in simulated conditions; PCP- practical classes with patient; FLC- foreign language course; PE- physical education; VP- vocational practice; DSS- directed self-study; EL- E-learning													



Student's amount of work (balance of ECTS points):	
Student's workload (class participation, activity, preparation, etc.)	Student Workload
1. Number of hours of direct contact:	15
2. Number of hours of distance learning:	5
3. Number of hours of student's own work:	7,5
4. Number of hours of directed self-study	n/a
Total student's workload	27,5
ECTS points for course	1
Content of classes: (please enter topic words of specific classes divided into their didactic form and remember how it is translated to intended educational effects)	
Lectures	
<ol style="list-style-type: none"> 1. Conducting clinical trials in accordance with GCP principles. Ethical aspects of clinical trials of new drugs and placebo use. Interpretation of phase I, II, III, IV clinical trial protocols. Planning a clinical trial. (1,5) 2. EBM in pharmacotherapy. Pharmacoeconomic aspects of therapy. (1,5) 3. Individualization of pharmacotherapy in the elderly, including optimization of cancer and chronic pain management. The importance of interprofessional cooperation between physician and pharmacist in the process of increasing the effectiveness and safety of therapy. (2,0) 	
Seminars	
Classes	
<ol style="list-style-type: none"> 1. Adverse drug reactions, with particular emphasis on the adverse consequences of drug interactions relevant to medical practice. Medication errors. The influence of environmental factors and circadian rhythm on drug effects. Pharmacovigilance. Compliance with therapeutic recommendations. (3,0) 2. Changes in drug action determined by disturbances of their kinetics in pathological states, including drug dosing in liver and kidney failure. Therapeutic management in acute poisonings. Monitoring the condition of a patient poisoned by chemicals or drugs. (3,0) 3. Individualization of pharmacotherapy in pregnant, lactating women, and children, including pain management and antibiotic therapy. (3,0) 4. Optimization of pharmacotherapy based on genetic testing and monitoring of drug concentrations in the body. Calculation of altered drug dose and altered dosing interval based on measurement of their serum concentrations. Importance of pharmacokinetic-pharmacodynamic modeling in antibiotic therapy. (3,0) 5. Interpret pharmaceutical drug product characteristics and critically evaluate drug advertising materials. (3,0) 	
Other	
Basic literature (list according to importance, no more than 3 items)	
<ol style="list-style-type: none"> 1. Katzung B.G., Trevor A.J.: Basic&Clinical Pharmacology. Mc Graw Hill Education, 2020. 2. Atkinson S.: Geriatric Pharmacology. The Principles of Practice&Clinical Recommendation. PESI Publishing Media, 2016. 3. Arnold R.J.G.: Pharmacoeconomics. From Theory to Practice. CRC Press, 2021. 	
Additional literature and other materials (no more than 3 items)	
<ol style="list-style-type: none"> 1. Doan T., Renz C., Bhattacharya M., Lievano F., Scarazzini L.: Pharmacovigilance: A Practical Approach. ELSEVIER, 2019. 2. Katzung B.G., Kruidering-Hall M., Trevor A.J.: Katzung&Trevor's Pharmacology: Examination&Board Review. Mc Graw Hill Education, 2018. 3. Whittlesea C., Hodson K.: Clinical Pharmacy and Therapeutics. Elsevier, 2019. 	
Preliminary conditions: (minimum requirements to be met by the student before starting the course)	
Completion and passing of a course in pharmacology and toxicology.	
Conditions to receive credit for the course: (specify the form and conditions of receiving credit for classes included in the course, admission terms to final theoretical or practical examination, its form and requirements to be met by the student to pass it and criteria for specific grades)	
Attention! Attendance can not be a condition for passing the course	
The basis of course credit is the attendance at lectures and classes (in accordance with the Academic Regulations), active participation in classes and the implementation of assigned tasks, and obtaining a positive rating (minimum 61% points) from the final written multiple-choice test (MCQ).	



The student prepares for the exam on the basis of the knowledge gained in lectures, classes and on the basis of the indicated literature and own work.

Each absence from both lectures and classes must be justified in writing by delivering the original document to the lecturer, and must be made up. In the case of absence of students due to days / hours of the Rector / Dean on request of students classes will be made up at another time (agreed with the teacher) or students will perform additional, individual work with the theme of the missed classes as part of self-study.

The credit is obtained through direct contact with the academic teacher. In justified cases, upon the decision of the Rector, it may be done using electronic means of communication. It shall be conducted in writing, in a manner laid down in the course regulations.

Grade:	Criteria for courses ending with a grade ³
Very Good (5.0)	obtaining 96-100% of points
Good Above (4.5)	obtaining 91-95% of points
Good (4.0)	obtaining 81-89% of points
Satisfactory Plus (3.5)	obtaining 71-80% of points
Satisfactory (3.0)	obtaining 61-70% of points
	Criteria for courses ending with a credit³
Credit	

Grade:	Criteria for exam ³
Very Good (5.0)	
Good Above (4.5)	
Good (4.0)	
Satisfactory Plus (3.5)	
Satisfactory (3.0)	

Department in charge of the course:	Department of Clinical Pharmacology
Department address:	50-556 Wrocław, ul. Borowska 211A
Telephone:	71 7840601
E-Mail:	wf-12@umed.wroc.pl

Person in charge for the course:	Prof. dr hab. Anna Wiela-Hojeńska
Telephone:	71 7840582
E-Mail:	anna.wiela-hojenska@umed.wroc.pl

List of persons conducting specific classes:

Name and surname	Degree/scientific or professional title	Discipline	Performed profession	Form of classes
Anna Wiela-Hojeńska	prof. dr hab. n. farm.	pharmaceutical sciences	academic teacher	L
Przemysław Niewiński	dr hab. n. farm.	pharmaceutical sciences	academic teacher	L, MC
Paweł Petryszyn	dr n. med.	medical sciences	academic teacher	L, MC
Beata Sienkiewicz-Oleszkiewicz	dr n. farm.	pharmaceutical sciences	academic teacher	MC

³ The verification must cover all education results, which are realized in all form of classes within the course



Kamila Urbańczyk	mgr farm.	pharmaceutical sciences	academic teacher	MC
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Date of Syllabus development

22.06.2021

Syllabus developed by

Anna Wiela-Hojeńska

Dean's signature

Wrocław Medical University
Faculty of Medicine
Vice Dean for English Studies
prof. Beata S. Wesołowska, PhD

Signature of Head(s) of teaching unit(s)
Uniwersytet Medyczny we Wrocławiu
KATEDRA I ZAKŁAD
FARMAKOLOGII KLINICZNEJ
p.o. kierownika

prof. dr hab. Anna Wiela-Hojeńska