

Syllabus 2020/2021														
Description of the course														
Module/Course	Clinical Pharmacology										Group of detailed education results			
											Group code	Group name		
											E	Non-interventional Clinical Sciences		
Faculty	Medicine													
Major	medicine													
Specialties	Not applicable													
Level of studies	Uniform magister studies X * 1 <sup>st</sup> degree studies <input type="checkbox"/> 2 <sup>nd</sup> degree studies <input type="checkbox"/> 3 <sup>rd</sup> degree studies <input type="checkbox"/> postgraduate studies <input type="checkbox"/>													
Form of studies	X full-time <input type="checkbox"/> part-time													
Year of studies	IV					Semester VIII		<input type="checkbox"/> Winter					X Summer	
Type of course	X obligatory <input type="checkbox"/> limited choice <input type="checkbox"/> free choice / elective													
Course	X major <input type="checkbox"/> basic													
Language of instruction	<input type="checkbox"/> Polish X English <input type="checkbox"/> other													
* mark <input type="checkbox"/> with an X														
Amount of hours														
Form of education														
Unit teaching the course	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)	Specialist Classes – magister studies (SCM)	Foreign language Course (FLC)	Physical Education obligatory (PE)	Vocational Practice (VP)	Self-Study (Student's own work)	E-learning (EL)
Winter Semester														
Summer Semester														
	5			15										
TOTAL per year:														

	5			15									

Educational objectives (max. 6 items)

Familiarize students with the practical dimension:

- C1. risks associated with the applied drug therapy and methods of enhancing its efficacy and safety, including the rationalization of analgesic therapy and antibiotic therapy,
- C2. interpretation of information materials for medicines,
- C3. clinical and economic evaluation of health technologies.

Education result matrix for module/course in relation to verification methods of the intended education result and the type of class

Number of course education result	Number of major education result	Student who completes the module/course knows/is able to	Methods of verification of intended education results (forming and summarising)	Form of didactic class <i>**enter the abbreviation</i>
K 01	E.W8.	Describes and explains the course and symptoms of the aging process and the principles of comprehensive geriatric assessment and multidisciplinary care in relation to an elderly patient.	summary test with 60 closed questions	L, MC
K 02	E.W10.	Defines and explains the basic principles of pharmacotherapy of diseases in the elderly.		
K 03	E.W29	Explains the principles of treatment of pain, including cancer pain and chronic pain.		
K 04	E.W42.	Explains the indications for the implementation of the therapeutic drug monitoring.		
K 05	E.W43.	Defines the basic concepts of pharmaco-economic.		
S 01	E.U17.	Analyzes the possible adverse effects of individual drugs and the interactions between them.	assessment of the use of theoretical knowledge to solve clinical cases including material presented during lectures, classes and mandatory literature	L, MC
S 02	E.U18.	Proposed individualization of existing guidelines and other therapeutic treatments to ineffectiveness or contraindications to standard therapy.		
S 03	E.U19.	Recognizes the symptoms of drug dependence and proposes therapeutic treatment.		
S 04	E.U31	Interprets characteristics of pharmaceutical medicines and critically evaluate advertising relating to drugs.		

S 05	E.U33.	Implements basic treatment in acute intoxication.		
S 06	E.U34.	Monitors the condition of the patient who is poisoned by chemical substances or drugs.		
<p><b>**</b> L - lecture; SE - seminar; AC – auditorium classes; MC – major classes (non-clinical); CC – clinical classes; LC – laboratory classes; SCM – specialist classes (magister studies); CSC – classes in simulated conditions; FLC – foreign language course; PCP practical classes with patient; PE – physical education (obligatory); VP – vocational practice; SS – self-study, EL – E-learning .</p>				
<p>Please mark on scale 1-5 how the above effects place your classes in the following categories: communication of knowledge, skills or forming attitudes: Knowledge: 5 Skills: 5</p>				
<b>Student's amount of work (balance of ECTS points)</b>				
<b>Student's workload</b> (class participation, activity, preparation, etc.)			<b>Student Workload (h)</b>	
1. Contact hours:			20	
2. Student's own work (self-study):			7.5	
Total student's workload			27.5	
ECTS points for module/course			0.5	
Comments				
<b>Content of classes</b> (please enter topic words of specific classes divided into their didactic form and remember how it is translated to intended educational effects)				
<b>Lectures</b>				
<ol style="list-style-type: none"> <li>Adverse drug reactions, with particular emphasis on the undesirable consequences of drug interactions important in medical practice. Pharmacovigilance. (2h)</li> <li>Individualization of pharmacotherapy in elderly people. (1h)</li> <li>Pharmacoeconomics aspects of treatment. (1h)</li> <li><b>Therapeutic management in acute intoxication. Monitoring the condition of the patient poisoned by chemical substances or drugs. (1h)</b></li> </ol>				
<b>Seminars</b>				
<b>Practical classes</b>				
<ol style="list-style-type: none"> <li>Individualization of pharmacotherapy during pregnancy, lactation and in children. (2h)</li> <li>Optimization of pharmacotherapy based on genetic testing. (1h)</li> <li>Pathopharmacokinetics. Drug dosage adjustment in kidney failure. (2h)</li> <li>The influence of environmental factors and circadian rhythm on the actions of drugs. (0.5h)</li> <li>Effective and safe pharmacotherapy of pain. (1h)</li> <li>Rational antibiotic therapy. (2h)</li> <li>Therapeutic drug monitoring. Individualization of drug therapy. (2h)</li> <li>The interpretation of the characteristics of pharmaceutical medicines and critical evaluation of promotional materials for the drug. (1h)</li> <li>Conducting clinical trials in accordance with the principles of GCP. Ethical aspects of clinical trials of new drugs and placebo. Interpretation of clinical protocols I, II, III, IV trials. Planning a clinical trial. (2h)</li> <li>EBM in pharmacotherapy. (0.5h)</li> <li>Compliance with treatment recommendations. (0.5h)</li> <li>Drug errors. (0.5h)</li> </ol>				
<b>Other</b>				
<b>Basic literature</b> (list according to importance, no more than 3 items)				

1. Katzung B.G., Trevor A.J.: Basic&Clinical Pharmacology. Mc Graw Hill Education, 2018.
2. Whittlesea C., Hodson K.: Clinical Pharmacy and Therapeutics. Elsevier, 2019.
3. Katzung B.G., Kruidering-Hall M., Trevor A.J.: Katzung&Trevor's Pharmacology: Examination&Board Review. Mc Graw Hill Education, 2018.

Additional literature and other materials (no more than 3 items)

1. Doan T., Renz C., Lievano F., Bhattacharya M., Scarazzini L.: Pharmacovigilance: A Practical Approach. Elsevier, 2018.
2. Derendorf H., Schmidt S.: Rowland and Tozer's Clinical Pharmacokinetics and Pharmacodynamics: Concepts and Applications. Wolters Kluwer, 2019.
3. Hilal-Dandan R., Knollman B., Brunton L.: Goodman&Gilman's the Pharmacological Basis of Therapeutics. 2018.

Didactic resources requirements (e.g. laboratory, multimedia projector, other...)  
seminar room, therapeutic drug monitoring laboratory, multimedia projector, computer

Preliminary conditions (minimum requirements to be met by the student before starting the module/course)  
knowledge of pharmacology and toxicology

Conditions to receive credit for the course (specify the form, criteria and conditions of receiving credit for classes included in the module/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).

The basis for passing is attendance and to obtain a positive mark (at least 61%) from written test (60 closed questions). Students prepares for passing on the basis of knowledge from lectures, classes, literature and self-study.

Each absence must be made up, including rector's days or dean's hours.

<b>Grade:</b>	<b>Criteria for course</b>
Very Good (5.0)	obtaining 96-100% of points
Good Plus (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

<b>Grade:</b>	<b>Criteria for exam (if applicable)</b>
Very Good (5.0)	
Good Plus (4.5)	
Good (4.0)	
Satisfactory Plus (3.5)	
Satisfactory (3.0)	

<b>Name of unit teaching course:</b>	<b>Department of Clinical Pharmacology</b>
Address	<b>50-556 Wrocław, Borowska 211a</b>
Phone	<b>71 7840601</b>
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<b>Person responsible for course:</b>	<b>Prof. dr hab. Anna Wiela-Hojeńska</b>
Phone	<b>71 7841768</b>
E-mail	<b>anna.wiela-hojenska@umed.wroc.pl</b>

<i>List of persons conducting specific classes:</i>	<i>degree/scientific or professional title</i>	<i>Discipline</i>	<i>Performer profession</i>	<i>Form of classes</i>
Anna Wiela-Hojeńska	prof. dr hab.	clinical pharmacy, pharmacodynamics, clinical pharmacology	academic teacher	L
Przemysław Niewiński	dr hab.	clinical pharmacology, anaesthesiology	academic teacher	L, MC
Paweł Petryszyn	PhD	clinical pharmacology, gastroenterology	academic teacher	L, Mc
Beata Sienkiewicz-Oleszkiewicz	PhD	clinical pharmacy	academic teacher	MC
Piotr Milejski	Dr hab.	clinical pharmacy, pharmacodynamics, clinical pharmacology	academic teacher	MC
Magdalena Hurkacz	PhD	clinical pharmacy, clinical pharmacology	academic teacher	MC

**Date of Syllabus development**

26.05.2020

**Syllabus developed by**

Prof. dr hab. Anna Wiela-Hojeńska

**Signature of Head of teaching unit**

**Signature of Faculty Dean**

Wrocław Medical University  
Faculty of Medicine  
Vice Dean for English Studies  
prof. Beata Sienkiewicz-Oleszkiewicz, PhD

Uniwersytet Medyczny we Wrocławiu  
KATEDRA ZAKŁAD  
FARMAKOLOGII KLINICZNEJ  
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prof. dr hab. Anna Wiela-Hojeńska

