



TOTAL per year: 15												
Department of Clinical Pharmacology				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 summarizing)	Form of didactic class <i>**enter the abbreviation</i>								
W 1	E.W 8	Knows and understands 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 3 open questions	MC,SS								
W 2	E.W 10	Knows and understands the basic principles of pharmacotherapy of diseases in the elderly.										
W 3	E.W 29	Knows the principles of treatment of pain, including cancer pain and chronic pain.										
W 4	E.W 40	Lists the indications for the implementation of the therapeutic drug monitoring.										
W 5	E.W 41	Defines the basic concepts of pharmacoeconomic.										
U 1	E.U 17	Analyses 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 classes and mandatory literature	MC, SS								
U 2	E.U 18	Proposed individualization of existing guidelines and other therapeutic treatments to ineffectiveness or contraindications to standard therapy.										
U 3	E.U 19	Recognizes the symptoms of drug dependence and proposes therapeutic treatment.										
U 4	E.U 31	Interprets characteristics of pharmaceutical medicines and critically evaluate advertising relating										



to drugs.	
<p>** 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>	
Student's amount of work (balance of ECTS points)	
Student's workload (class participation, activity, preparation, etc.)	Student Workload (h)
1. Contact hours:	15
2. Student's own work (self-study):	7,5
Total student's workload	22,5
ECTS points for module/course	0,5
Comments	
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	
Classes	
<ol style="list-style-type: none"> 1. Adverse drug effects, with particular emphasis on adverse consequences of drug interactions important in medical practice. Pharmacovigilance. 2. Individualization of pharmacotherapy in children and the elderly. 3. Optimization of pharmacotherapy based on genetic testing. 4. Optimization of pharmacotherapy during pregnancy. 5. Pathopharmacokinetics. Drug dosage adjustment in kidney failure. 6. The influence of environmental factors and circadian rhythm to the drugs. 7. Effective and safe pharmacotherapy of pain. 8. Rational antibiotic therapy. 9. Therapeutic drug monitoring. Individualization of drug therapy. 10. Pharmacoeconomics aspects of treatment. 11. The interpretation of the characteristics of pharmaceutical medicines and critical evaluation of promotional materials for the drug. 12. 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. 13. EBM in pharmacotherapy. 14. Compliance with treatment recommendations. 	
Practical classes	
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, 2017. 2. Müller M.: Clinical pharmacology: current topics and case studies. Springer International Publishing, 2016. 3. Brody T.: Clinical Trials : Study Design, Endpoints and Biomarkers, Drug Safety, and FDA and ICH Guidelines. Elsevier Science Publishing Co Inc, 2016. 	
Additional literature and other materials (no more than 3 items)	
<ol style="list-style-type: none"> 1. Altman R.B., Flockhart D., Goldstein D.B.: Principles of pharmacogenetics and pharmacogenomics. Cambridge University Press, 2012. 	



2. Bennett P.N., Brown M.J., Sharma P.: Clinical pharmacology. Churchill Livingstone Elsevier, 2012.
3. Murphy J. E.: Clinical Pharmacokinetics. American Society of Health-System Pharmacists, 2016.

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

Preliminary conditions (minimum requirements to be met by the student before starting the module/course)

Pass the exam "Pharmacology and toxicology"

Conditions to receive credit for the course (specify the form 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 the subject is attendance in the classroom in accordance with the Study Regulations and obtaining a positive mark (at least 61%) from written test covering 3 open questions. The student prepares to pass on the basis of knowledge from classes, literature and self-study. Each absence must be made up, including rector days and dean's hours (in the form of a presentation or essay prepared by the student as part of self-education).

Grade:	Criteria (only for courses/modules ending with an examination)
Very Good (5.0)	obtaining 96-100% points at the final pass
Good Plus (4.5)	obtaining 91-95% points at the final pass
Good (4.0)	obtaining 81-90% points at the final pass
Satisfactory Plus (3.5)	obtaining 71-80% points at the final pass
Satisfactory (3.0)	obtaining 61-70% points at the final pass

Name and address of module/course teaching unit, contact: telephone and e-mail address

Department of Clinical Pharmacology
Wrocław Medical University
ul. Borowska 211A
50-556 Wrocław
tel. 71 7841768

Coordinator / Person responsible for module/course, contact: telephone and e-mail address

Prof. dr hab. Anna Wiela-Hojeńska
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List of persons conducting specific classes: full name, degree/scientific or professional title, discipline, performed profession, form of classes.

Anna Wiela-Hojeńska, prof. dr hab., clinical pharmacology, clinical pharmacy, academic teacher, MC



Przemysław Niewiński, dr hab., clinical pharmacology, anaesthesiology, academic teacher, MC
Paweł Petryszyn, PhD, clinical pharmacology, gastroenterology, academic teacher, MC
Piotr Milejski, dr hab., clinical pharmacology, clinical pharmacy, academic teacher, MC
Magdalena Hurkacz, PhD, clinical pharmacology, academic teacher, MC
Beata Sienkiewicz, Msc, clinical pharmacy, academic teacher, MC

Date of Syllabus development

4.07.2018

Syllabus developed by

Prof. dr hab. Anna Wiela-Hojeńska
Dr Magdalena Hurkacz

Signature of Head of teaching unit

Signature of Faculty Dean

Wrocław Medical University
FACULTY OF MEDICINE
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Prof. Andrzej Hendrich, PhD

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KATEDRA I ZAKŁAD
FARMAKOLOGII KLINICZNEJ
Kierownik

prof. dr hab. Anna Wiela-Hojeńska