



## Pomorski Uniwersytet Medyczny w Szczecinie

### MODULE SYLLABUS - PHARMACOLOGY

#### General information

MODULE NAME:	
Module type	Obligatory
PMU Faculty	Faculty of Medicine and Dentistry
Field of study	Medicine
Speciality	Not applicable
Study level	Uniform master
Type of study	stationary, non-stationary
Year of study	III, semester VI
ECTS	3
Forms of instruction (hours)	Lectures/seminars/classes 45h (25 h seminars; 20 h classes) Σ:45 godz
Knowledge verification/grading system	<input checked="" type="checkbox"/> credit: <ul style="list-style-type: none"> <li><input type="checkbox"/> written, descriptive</li> <li><input checked="" type="checkbox"/> test</li> <li><input type="checkbox"/> practical</li> <li><input type="checkbox"/> oral</li> </ul> <input type="checkbox"/> credit, no grade  <input type="checkbox"/> final exam: <ul style="list-style-type: none"> <li><input type="checkbox"/> written, descriptive</li> <li><input type="checkbox"/> test</li> <li><input type="checkbox"/> practical</li> <li><input type="checkbox"/> oral</li> </ul>
Head of department	Prof. dr hab. n. med. Marek Drożdżik
Responsible person	Prof. dr hab. Anna Machoy-Mokrzyńska amachoy@pum.edu.pl 91-4661589
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Web page	www.farmakol.pum.edu.pl
Instruction language	Polish/English

### Detailed information

Module tasks		<p>1. Detailed information about particular drug classes, drug names, actions</p> <p>2. Principles for clinical drug applications.</p> <p>3. Discussion of principal drug side effects, including drug-drug interaction consequences.</p> <p>4. Drug prescription standards and practice of prescription.</p>
Prerequisite knowledge	Knowledge	Principles of anatomy, biochemistry, physiology and pathophysiology
	Skills	Understanding of pharmacology principles, mechanisms of drug actions in terms of indications and contraindications, dosage, side effects and toxicity, as well as drug-drug interactions.
	Social competences	Self-education and teamwork skills

DESCRIPTION OF TEACHING EFFECTS FOR THE MODULE (SUBJECT)			
Numer of teaching effects	Student, who completed the module (subject) knows/can/is able:	SYMBOL (reference) to learning outcomes	Assessment of learning outcomes
W01	is able to characterize individual groups of therapeutic agents	C.W35	W, DU, ZaT
W02	is able to explain the mechanisms of drugs actions and their changes in the system depending on age	C.W36	W, DU, ZaT
W03	discusses the impact of disease states on drug metabolism and elimination	C.W37	W, DU, ZaT
W04	knows the basic principles of pharmacotherapy	C.W38	W, K, ET, SP
W05	knows the most important side effects of drugs, including drug-drug interactions	C.W39	W, DU, ZaT
W06	understands aspects of drug resistance, including multidrug resistance	C.W40	W, DU, ZaT
W07	knows the indications for pharmacogenetics to individualize pharmacotherapy	C.W41	W, DU, ZaT
W07	indicates the basic directions of the development of therapy, in particular possibilities of cell, gene and targeted therapies in specific diseases	C.W42	W, DU, ZaT
U01	calculates basic pharmacokinetic parameters	C.U13	O

U02	adjusts drug dosing to adopt medication to systemin and specific organ pathological states	C.U14	O, SP, PS, Ka
U03	uses pharmaceutical sources and databases on medicinal products	C.U17	O, PS, Ka
K01	notices and recognizes own limitations, performs self-assessment of educational deficits and needs	K.5	O
K02	promotes health behavior	K.6	O
K03	uses objective sources of information	K.7	O

Traching effects matrix for the module (subject) referred to type of didactic forms								
Numer of teaching effects	Teaching effects	Type of didactic activity						
		Lecture	Seminar	Laboratory	Clinical classes	Simulation	E-learning	Others
W01	C.W35	X					X	
W02	C.W36	X					X	
W03	C.W37	X					X	
W04	C.W38	X					X	
W05	C.W39	X					X	
W06	C.W40	X					X	
W07	C.W41	X					X	
W08	C.W42	X					X	
U01	C.W13			X				
U02	C.U14			X				
U03	C.U17			X				
K01	K.5			X				
K02	K.6			X				
K03	K.7			X				

MODULE (SUBJECT) TEACHING CONTENT			
Symbol of teaching content	Description of teaching content	Hours	Reference to teaching effects for the module
<b>Summer semester</b>			
	<b>Lectures/Seminars</b>	$\Sigma$ 25 godz.	
TK01	Principles of pharmacology	1	C.W35, C.W36, C.W37, C.W38, C.W39
TK02	Introduction to autonomic nervous system	1	C.W35, C.W36, C.W37, C.W38, C.W39
TK03	Autonomic nervous system drugs in cardiovascular diseases. Part 1	1	C.W35., C.W36, C.W37, C.W38, C.W39
TK04	Autonomic nervous system drugs in cardiovascular diseases. Part 2	1	C.W35, C.W36, C.W37, C.W38, C.W39

TK05	Druga in hypertension. Part 1	1	C.W35, C.W36, C.W37, C.W38, C.W39
TK06	Druga in hypertension. Part 2	1	C.W35, C.W36, C.W37, C.W38, C.W39
TK07	Drugs in coronary artery disease	1	C.W35, C.W36, C.W37, C.W38, C.W39
TK08	Drugs in heart infarction	1	C.W35, C.W36, C.W37, C.W38, C.W39
TK09	Drugs in heart failure	1	C.W35, C.W36, C.W37, C.W38, C.W39
TK010	Diuretics	1	C.W35, C.W36, C.W37, C.W38, C.W39
TK011	Antiarrhythmic agents	1	C.W35, C.W36, C.W37, C.W38, C.W39
TK012	Autacoids	1	C.W35, C.W36, C.W37, C.W38
TK013	Introduction to psychotropic drugs	1	C.W35, C.W36, C.W38, C.W39
TK014	Procognitive drugs	1	C.W35, C.W36, C.W38, C.W39
TK015	Pharmacotherapy of affective disorders	1	C.W35, C.W36, C.W38, C.W39
TK016	Antidepressant and antipsychotic drugs	1	C.W35, C.W36, C.W38, C.W39
TK017	Drugs for extrapyramidal system disorders	1	C.W35, C.W36, C.W38, C.W39
TK018	Antiepileptic drugs	1	C.W35, C.W36, C.W38, C.W39
TK019	Drugs in pediatrics psychiatry. Part 1	1	C.W35, C.W36, C.W38, C.W39
TK020	Drugs in pediatrics psychiatry. Part 2	1	C.W35, C.W36, C.W38, C.W39
TK021	General anesthetics	1	C.W35, C.W36, C.W38
TK022	Myorelaxant agents	1	C.W35, C.W36, C.W38
TK023	Immunosuppressant drugs	1	C.W35, C.W36, C.W40, C.W41
TK024	Anticancer drugs	1	C.W35, C.W36, C.W41, C.W42
TK025	Biologic drugs	1	C.W35, C.W36, C.W42
<b>Practicals</b>		<b>20</b>	
TK01	Principles of pharmacokinetics and pharmacodynamics	2	C.U14, K7
TK02	Parasympathetic system agents	2	C.U14, C.U17, K.7
TK03	Agonists of sympathetic system	2	C.U14, C.U17, K.7
TK04	Antagonists of sympathetic system	2	C.U14, C.U17, K.7
TK05	Renin-angiotensin-aldosterone system drugs	2	C.U14, C.U17, K.7
TK06	Nitrates, calcium channel antagonists	2	C.U14, C.U17, K.7
TK07	Summary – practical applications of cardiovascular drugs pharmacology	2	C.U14, C.U17, K5, K6, K7

TK08	Anxiolytic, sedative drugs and hypnotic agents	2	C.U14, C.U17, K.7
TK09	Summary – practical applications of psychotropic drugs	2	C.U14, C.U17, K5, K6, K7
TK10	Drug prescription introduction and practicals	2	C.U17, K5, K7

<b>Books</b>	
Basic	
Pharmacology, 7th Edition, Lippincott Illustrated Reviews Series by Richard A. Harvey, Michelle A Clark, Richard Finkel, Jose A. Rey, Karen Whalen	
Pharmacology, 5th Edition, Elsevier By George M. Brenner, Craig Stevens	
Rang & Dale's Pharmacology, 9th Edition, Elsevier by James M. Ritter, Rod J. Flower, Graeme Henderson, Humphrey P. Rang	
Auxiliary	
Goodman and Gilman's The Pharmacological Basis of Therapeutics, 13th Edition, McGraw-Hill Education by Laurence Brunton, Bjorn Knollman, Randa Hilal-Dandan	

<b>Student workload</b>	
Form of student workload (participation in classes/seminars, activity, report writing, etc.)	Student workload [h]
	Teacher's evaluation
Direct teaching	45
Classes/seminar preparation	10
Self-reading of the specified literature	15
Laboratory reports writing/project preparation	-
Section testing preparation	20
Exam preparation	-
Others	-
Summary of students workload	90
ECTS points	3
<b>Comments</b>	