



# Pomorski Uniwersytet Medyczny w Szczecinie

## MODULE SYLLABUS (SUBJECT)

### General information

Module code	Module name	Pharmacology
Module type		<i>Obligatory</i>
PMU Faculty		<i>Faculty of Medicine</i>
Field of study		<i>Medicine</i>
Specjalność		<i>Not applicable</i>
Study level		<i>Uniform master</i>
Type of study		<i>stationary, non-stationary</i>
Year of study		<i>III IV</i>
Semester		<i>III, for IVth year block system</i>
Liczba przypisanych punktów ECTS		<i>III - 3 IV - 6</i>
Forms of instruction		<i>Lectures/seminars/classes III year - 45h (15 h seminars; 30 h classes) credit IV year - 70h (25 h seminars; 45h classes) exam</i>
Responsible person		<i>Prof. Marek Drożdżik</i>
Teaching staff		<ol style="list-style-type: none"><li>1. prof. Marek Drożdżik drozdzik@pum.edu.pl</li><li>2. prof. Barbara Gawrońska-Szklarz gszklarz@pum.edu.pl</li><li>3. assoc. prof. Monika Białecka monika-bialecka@post.pl</li><li>4. assoc. prof. Anna Machoy-Mokrzyńska amachoy@pum.edu.pl</li><li>5. dr. Stefania Juźwiak juzwiak@pum.edu.pl</li><li>6. dr. Ewa Żamojcin-Dąbrowska dabewa@vp.pl</li></ol>
Web page		<a href="https://www.pum.edu.pl/wydzialy/wydzial-lekarski/zaklad-farmakologii-doswiadczalnej-i-klinicznej">https://www.pum.edu.pl/wydzialy/wydzial-lekarski/zaklad-farmakologii-doswiadczalnej-i-klinicznej</a>
Instruction language		English

### Detailed information

Module tasks		<p>1. Familiarize students with issues of general pharmacology (mechanisms and effects of drug action, pharmacokinetic characteristics of drugs with focus on distribution, biotransformation) and drug interactions.</p> <p>2. Provide detailed information about particular drug classes, drug names, actions and principles for clinical application, and drug combination in a given therapeutic indication.</p> <p>3. Familiarize students with risks of drug misuse and acute poisoning with selected therapeutics discussed during the study course; and risks of drug abuse and prophylactics principles.</p> <p>4. Discussion and practice of prescriptions.</p> <p>5. Clinical cases discussion in the form of pharmacological workshops to consolidate and deepen the drug actions and clinical application; management of different sources of drug information.</p>
Prerequisite knowledge	Knowledge	<i>Principles of biochemistry, physiology, histology, genetics</i>
	Skills	<i>Basic mathematical calculations, the ability to use the acquired knowledge</i>
	Social competences	<i>Teamwork skills</i>

Description of teaching effects for the module (subject)			
Numer of teaching effects	Student, who completed the module (subject) knows/can/is able:	SYMBOL (reference) EKK	Assessing student achievement of learning outcomes (form of verification)
KL2JPW01	characterizes individual groups of drugs	K_C.W34	ET
KL2JPW02	knows the main mechanisms of action of drugs	K_C.W35	ET
KL2JPW03	determines the impact of disease stated on metabolism and elimination of drugs	K_C.W36	ET
KL2JPW04	knows the basic principles of pharmacotherapy	K_C.W37	ET
KL2JPW05	knows the most important side effects of drugs, including drug-drug interactions	K_C.W38	ET
KL2JPW06	understands aspects of drug resistance, including multidrug resistance	K_C.W39	ET
KL2JPW07	knows the indications for genetic testing to individualize pharmacotherapy	K_C.W40	ET
KL2JPW8	knows the basic outlines of therapy development, especially cell targeted therapy, gene therapy, and disease specific therapy	K_C.W41	ET
KL2JPW9	knows groups of drugs that can produce to poisoning	K_C.W43	ET
KL2JPW10	knows symptoms of the most common acute poisonings, including alcohol, psychoactive agents, heavy metals and selected drug groups.	K_C.W44	ET
KL2JPU01	performs simple pharmacokinetic	K_C.U13	S

	calculations		
KL2JPU02	drug decision making, dose adjustments to correct pathological states and organ pathology	K_C.U14	S
KL2JPU03	designs rational drug therapy for infections, empirical and targeted	K_C.U15	S
KL2JPU04	can correctly prepare records of all forms of prescription medicinal substances	K_C.U16	S
KL2JPU05	uses pharmaceutical sources and databases on medicinal products	K_C.U17	S
KL2JPKS01	posses ability to work in a group and is aware of the responsibility associated with professional career		

Teaching effects matrix for the module (subject) referred to type of didactic forms								
Numer of teaching effects	Student, who completed the module (subject) knows/can/is able:	Type of didactic activities						
		Lecture	Seminar	Laboratory classes	Project classes	Clinical classes	Classes	Practicals Others
KL2JPW01	characterizes individual groups of drugs		X				X	
KL2JPW02	knows the main mechanisms of action of drugs		X				X	
KL2JPW03	determines the impact of disease stated on metabolism and elimination of drugs		X				X	
KL2JPW04	knows the basic principles of pharmacotherapy		X				X	
KL2JPW05	knows the most important side effects of drugs, including drug-drug interactions		X				X	
KL2JPW06	understands aspects of drug resistance, including multidrug resistance		X				X	
KL2JPW07	knows the indications for genetic testing to individualize pharmacotherapy		X					
KL2JPW8	knows the basic outlines of therapy development, especially cell targeted therapy, gene therapy, and disease specific therapy		X					
KL2JPW9	knows groups of drugs that can produce to poisoning		X				X	
KL2JPW10	knows symptoms of the most common acute poisonings, including alcohol, psychoactive agents, heavy metals and selected drug groups.		X				X	
KL2JPU01	performs simple pharmacokinetic calculations						X	
KL2JPU02	drug decision making, dose adjustments to correct pathological states and organ pathology						X	
KL2JPU03	designs rational drug therapy for infections, empirical and targeted						X	
KL2JPU04	can correctly prepare records of all forms of prescription medicinal substances						X	
KL2JPU05	uses pharmaceutical sources and databases on medicinal products						X	

KL2JPKS01	posses ability to work in a group and is aware of the responsibility associated with professional career						X		
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Module (subject) teaching content		
Symbol of teaching content	Description of teaching content	Reference to teaching effects for the module
TK01	Peripheral nervous system drugs	KL2JPW01, KL2JPW02, KL2JPW03, KL2JPW04, KL2JPW05, KL2JPW06, KL2JPW07, KL2JPU01,02,04,05
TK02	Central nervous system drugs	KL2JPW01, KL2JPW02, KL2JPW03, KL2JPW04, KL2JPW05, KL2JPW06, KL2JPW07, KL2JPW9, KL2JPU01,02,04,05
TK03	Cardiovascular system agents	KL2JPW01, KL2JPW02, KL2JPW03, KL2JPW04, KL2JPW05, KL2JPW06, KL2JPW07, KL2JPU01,02,04,05
TK04	Endocrine pharmacology	KL2JPW01, KL2JPW02, KL2JPW03, KL2JPW04, KL2JPW05, KL2JPW06, KL2JPW07, KL2JPU01,02,04,05
TK05	Antimicrobial agents and chemotherapy	KL2JPW01, KL2JPW02, KL2JPW03, KL2JPW04, KL2JPW05, KL2JPW06, KL2JPW07, KL2JPW9, KL2JPU01,02, 03,04,05
TK06	Cardiovascular system agents	KL2JPW01, KL2JPW02, KL2JPW03, KL2JPW04, KL2JPW05, KL2JPW06, KL2JPW07, KL2JPU01,02,04,05
TK07	Systems drugs: gastrointestinal, respiratory, genitourinary	KL2JPW01, KL2JPW02, KL2JPW03, KL2JPW04, KL2JPW05, KL2JPW06, KL2JPW07, KL2JPU01,02,04,05

Books			
Pharmacology (Lippincott Illustrated Reviews Series) 5th Edition by Richard A. Harvey, Michelle A Clark, Richard Finkel, Jose A. Rey, Karen Whalen			
Pharmacology, 4e 4th Edition George M. Brenner, Craig Stevens			
Rang & Dale's Pharmacology, 8e 8th Edition by James M. Ritter, Rod J. Flower, Graeme Henderson, Humphrey P. Rang			
Student workload (summary of ECTS pts)			
Form of student workload (participation in classes/seminars, activity, report writing, etc.)	Student workload [h]		
	Teacher	Student	Mean
Direct teaching	0	130	130
Classes/seminar preparations	75	38	57
Self-reading of the specified literature	100	260	180
Laboratory reports writing/project preparation	0	0	0
Exam preparation	50	150	100

Others			
Total student workload	225	578	467
ECTS pts for the module	9		
Comments			

Evaluation methods, eg.:

E – exam- problem management

S – verification of practical skills

R – report

D – result discussion

P – presentation

Others -