



Syllabus academic year 2017/2018														
Description of the course														
Module/Course	Pharmacology		Group of detailed education results											
			Group code: C		Group name: preclinical subjects									
Faculty	Dentistry													
Major	Dentistry													
Specialties														
Level of studies	Uniform magister studies X* 1 st degree studies <input type="checkbox"/> 2 nd degree studies <input type="checkbox"/> 3 rd degree studies <input type="checkbox"/> postgraduate studies <input type="checkbox"/>													
Form of studies	X full-time X part-time													
Year of studies	III			Semester:				X Winter X Summer						
Type of course	X obligatory <input type="checkbox"/> limited choice <input type="checkbox"/> free choice / elective													
Course	<input type="checkbox"/> major X basic													
Language of instruction	<input type="checkbox"/> Polish X English <input type="checkbox"/> other													
* mark <input type="checkbox"/> with an X														
Number 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														
Department of Pharmacology	15	10		20										
Summer Semester														
Department of Pharmacology	10	10		25										
TOTAL per year:														
Department of Pharmacology	25	20		45										



Educational objectives (max. 6 items)

- C1. to familiarize students with the principles of rational pharmacotherapy, presenting the benefits and risks associated with drug use
 C2. to teach students how to verify the sources of information about drugs and the evaluation (based on scientific evidences) of medical publications and advertisements about drugs
 C3. to teach students general concepts and issues of pharmacodynamics, pharmacokinetics and pharmacoconomics
 C4. to teach students the principles of drugs action and dosage, routes of administration, their mechanisms of action, pharmacological and clinical effects, basic pharmacokinetic properties, the indications, contraindications, adverse effects and main interactions
 C5. to teach students determining the dosage of medicines in children and adults in various clinical conditions
 C6. to teach students the general rules of order writing and practical drug prescribing and orders for nurses

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>
W01, W02, W03	C.W.9,	knows and understands the phenomenon of drug resistance;	written or oral exam, test, oral answer, oral presentation, practical training in multiple choice tests	WY, SE, CN
	C.W.12,	knows the notions of: homeostasis, adaptation, resistance, immunity, propensity, susceptibility, compensation mechanisms, feedback and "vicious circle" mechanism		
	C.W.18,	knows and understands the mechanisms of action of drugs as well as pharmacokinetics and biotransformation of individual groups of drugs;		
	C.W.19,	knows the indications and contraindications for drugs, their dosage, adverse and toxic effects and drug-drug interactions;		
	C.W.20,	knows and understands the principles of antiviral, antibacterial, antifungal and antiparasitic therapy		
	C.W.21,	knows and understands the principles of preventing and combating pain and anxiety and pharmacology of drugs used in life-threatening situations;		



	C.W.22,	knows and correctly prescribes all forms of prescription of medicinal substances;		
	F.W.6,	knows the principles of local anesthesia of masticatory tissue;		
	F.W.15,	knows and understands the basics of antibiotic therapy and antibiotic resistance;		
	F.W.19	knows the principles of anesthesia in dental procedures and basic pharmacological agents		
U01, U02	C.U.8,	calculates corrects doses and prescribes drugs according to indications;	test, oral answer, oral presentation, practical training in multiple choice tests and drug calculations, exam in drug calculations	SE, CN
	F.U.12,	prescribes medication, considering their interactions and adverse effects;		
	F.U.19,	uses appropriate medications during and after the dental procedure to relieve pain and anxiety;		
<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: +++ Skills: ++</p>				
Student's amount of work (balance of ECTS points)				
Student's workload (class participation, activity, preparation, etc.)		Student Workload (h)		
1. Contact hours:		90		
2. Student's own work (self-study):		180		
Total student's workload		270		
ECTS points for module/course		6		
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 – 25 lecture hours

First semester (7 x 97 minutes) – 1`5 lecture hours

1. General pharmacology – introduction, mechanisms of drugs action.
2. General pharmacology – pharmacokinetics. Dosage forms of drugs.
3. General pharmacology – LADME.
4. General pharmacology – adverse effects and toxicity. Variation of drugs action.
5. Autonomic nervous system – introduction. Neuromuscular pharmacology. Neuromuscular blocking drugs. Myorelaxants. Spasmolytics.
6. Adrenergic system (adrenoceptor agonists and antagonists).
7. Cholinergic system (acetylcholine receptor agonists and antagonists).

Second semester (4 x 113 minutes) – 10 lecture hours

1. Diuretics. Electrolyte disturbances. Drugs for heart failure (CHF) – part 1.
2. Drugs for heart failure (CHF) – part 2. Drugs for hyperlipidemia. Drugs for coronary artery disease (CAD).
3. Antihypertensive drugs. Antiarrhythmics.
4. Anticoagulant, antiplatelet and fibrinolytic drugs.

Seminars – 20 lecture hours

First semester (5 x 90 minutes) – 10 lecture hours

1. Hypothalamic and pituitary drugs. Thyroid drugs. Dosage forms of drugs. Drug calculations.
2. Adrenal steroids and related drugs. Dosage forms of drugs. Drug calculations.
3. Drugs for diabetes mellitus. Dosage forms of drugs. Drug calculations.
4. Drugs affecting fertility and reproduction. Dosage forms of drugs. Drug calculations.
5. Drugs affecting calcium and bone. Vitamin D and other vitamins. Dosage forms of drugs. Drug calculations.

Second semester (4 x 113 minutes) – 10 lecture hours

1. Antifungal drugs. Antineoplastic agents. Dosage forms of drugs. Drug calculations.
2. Immunomodulating drugs. Sedative-hypnotic and anxiolytic drugs. Dosage forms of drugs. Drug calculations.
3. Antiepileptic drugs. Neurodegenerative disorders. Dosage forms of drugs. Drug calculations.
4. Psychoterapeutic drugs (antipsychotic drugs and antidepressants). Dosage forms of drugs. Drug calculations.

Classes – 45 lecture hours

First semester (10 x 90 minutes) – 20 lecture hours

1. Regulation of classes. General rules of order writing.
2. NSAIDs, rheumatoid arthritis, gout. Paracetamol. Dosage forms of drugs. Drug calculations.
3. Opioid analgesics. Analgesic ladder. Dosage forms of drugs. Drug calculations.
4. Local and general anesthetics. Dosage forms of drugs. Drug calculations.
5. Hematopoiesis (iron, vitamin B12, folic acid). Dosage forms of drugs. Drug calculations.
6. Drugs for gastrointestinal tract disorders. Dosage forms of drugs. Drug calculations.
7. Drugs for respiratory tract disorders. Dosage forms of drugs. Drug calculations.
8. Practical training in multiple choice tests part 1.
9. Practical training in drug calculation part 1.
10. Made-up class.

Second semester (10 x 113 minutes) – 25 lecture hours

1. Autacoid. Treatment of allergy and headache disorders. Dosage forms of drugs. Drug calculations.
2. Basis of antimicrobial chemotherapy and anaphylactic shock. Dosage forms of drugs. Drug calculations.



<ol style="list-style-type: none"> 3. Inhibitors of bacterial cell wall synthesis. Dosage forms of drugs. Drug calculations. 4. Inhibitors of bacterial protein synthesis. Dosage forms of drugs. Drug calculations. 5. Quinolones, antifolate drugs and other antimicrobial agents. Dosage forms of drugs. Drug calculations. 6. Tuberculostatics. Antiparasitic drugs (protozoa, helminths). 7. Antiviral drugs. Dosage forms of drugs. Drug calculations. 8. Practical training in multiple choice tests part 2. 9. Practical training in drug calculation part 2 10. Made-up class 	
<p>Basic literature (list according to importance, no more than 3 items)</p> <ol style="list-style-type: none"> 1. Brenner GM: Pharmacology 4th Ed, Saunders/Elsevier, 2013 <p>Additional literature and other materials (no more than 3 items)</p> <ol style="list-style-type: none"> 1. Wecker L: Brody's human pharmacology. 5th Ed, Mosby/Elsevier, 2010 2. Rang and Dale's Pharmacology. HP Rang, MM Dale, JM Ritter, RJ Flower, Churchill Livingstone Elsevier, 7th Ed, 2012. 3. Howland RD, Mycek MJ, Harvey RA, Champe PC: Lippincott's illustrated reviews: pharmacology, Lippincott Williams and Wilkins, 5th Ed, 2012 	
<p>Didactic resources requirements (e.g. laboratory, multimedia projector, other...) multimedia projector, interactive board</p>	
<p>Preliminary conditions (minimum requirements to be met by the student before starting the module/course) – basic knowledge of anatomy, physiology and microbiology</p>	
<p>Conditions for completing the individual classes: Presence on classes is obligatory.</p> <p>Conditions for completing each semester: Besides required presence on classes (missed not more than 10%) student is obliged to gain in each semester 1 positive mark from multiple choice test, 1 positive mark from practical drug calculations and during the whole academic year 1 positive mark from oral answer.</p> <p>To take the final exam: Completing both semesters within time according to the regulations of the study.</p> <p>Final theoretical exam: Final is exam is in a form of multiple choice test – 100 questions in the first and second term. To pass the test 60% of correct answers are required. The level may be only decreased in some situations. Theoretical exam may be in written (open questions) or oral form (to pass the oral exam correct answers on all of 3 chosen questions are required) in case of a smaller number of students during the first or second retake or commission exam.</p> <p>Final practical exam (drug calculation and order writing): Final practical exam is written before theoretical test and is required to take theoretical part of the exam. To pass drug calculation test correct calculations and writing of the 2 prescriptions and 1 order for the nurse are required</p>	
Grade:	Criteria (only for courses/modules ending with an examination)
Very Good (5.0)	92% points
Good Plus (4.5)	84% points
Good (4.0)	76% points
Satisfactory Plus (3.5)	68% points
Satisfactory (3.0)	60% points



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

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

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List of persons conducting specific classes: full name, degree/scientific or professional title, discipline, performed profession, form of classes.

Classes:

Anna Merwid-Ląd MD, PhD;
Tomasz Sozański MD, PhD,
Dorota Książczyńska, MD, PhD
Monika Skrzypiec-Spring MD, PhD,
Beata Nowak MD, PhD

Lectures and seminars:

Anna Merwid-Ląd MD, PhD

Date of Syllabus development

22.06.2017

revised 08.03.2018

Syllabus developed by

Anna Merwid-Ląd, MD, PhD

Beata Nowak, MD, PhD

Signature of Head of teaching unit

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Signature of Faculty Dean

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