

Course description

Part 1

General information about the course		
1. Major of study: medicine	2. Study level: unified MSc	
	3. Form of study: intramural	
4. Year: 4	5. Semester: 7, 8	
6. Course name: Pharmacology I+II		
7. Course status: required		
8. Course contents and assigned learning outcomes		
Pharmacology is the study of drugs and their effects on life processes. The aim of the pharmacology course is to familiarize students with the physical and chemical properties of drugs and their mechanism of action, the pathways of the drug in the body and relationship between dose and drug response, and the problems of interaction between medicines which provides a rational basis for pharmacotherapy.		
Learning outcomes / reference to learning outcomes indicated in the standards		
For knowledge – student knows and understands:		
C.W35. C.W36. C.W37. C.W38. C.W39. C.W40. C.W41. C.W42. C.W43. C.W44. C.W45.		
For skills student can do: C.U13. C.U14. C.U15. C.U16.		
C.U17. C.U18.		
For social competencies student is ready to:		
1. perceiving and recognizing one's own limitations, self-assessing deficits and constant educational needs;		
2. establishing relationships with the patient and colleagues based on mutual trust and respect;		
3. implementing the principles of professional comradeship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment ;		
4. compliance with confidentiality regarding health, patient rights and professional ethics;		
5. presenting an ethical and moral attitude consistent with ethical principles and taking action based on a code of ethics in professional practice;		
6. propagating pro-health behavior;		
7. using objective sources of information;		
9. Number of hours for the course		165
10. Number of ECTS points for the course		13
11. Methods of verification and evaluation of learning outcomes		
Learning outcomes	Methods of verification	Methods of evaluation*
Knowledge	Written evaluation – open questions Grade credit – MCQ	* written Multiple choice Questions test MCQ
Skills	Not evaluated preclinical sciences	Not evaluated preclinical sciences
Competencies	Not evaluated preclinical sciences	Not evaluated preclinical sciences

* The following evaluation system has been assumed:

Very good (5,0) – the assumed learning outcomes have been achieved and significantly exceed the required level

Better than good (4,5) – the assumed learning outcomes have been achieved and slightly exceed the required level

Good (4,0) – the assumed learning outcomes have been achieved at the required level

Better than satisfactory (3,5) – the assumed learning outcomes have been achieved at the average required level

Satisfactory (3,0) – the assumed learning outcomes have been achieved at the minimum required level

Unsatisfactory (2,0) – the assumed learning outcomes have not been achieved

Course description

Part 2

Other useful information about the course		
12. Name of Department, mailing address, e-mail: Pharmacology Department, Poland, 40-752 Katowice, Medyków str.18, farmklin@sum.edu.pl		
13. Name of the course coordinator: associated professor Małgorzata Huzarska PhD		
14. Prerequisites for knowledge, skills and other competencies: basic knowledge in the field of general biology on the medical studies level basic knowledge in the field of anatomy on the medical studies level basic knowledge in the field of physiology on the medical studies level basic knowledge in the field of biochemistry on the medical studies level basic knowledge in the field of general chemistry on the medical studies level basic knowledge in the field of physics on the medical studies level		
15. Number of students in groups	in accordance with the Senate Resolution	
16. Study materials	prepared by teacher responsible for a specific topic	
17. Location of classes	seminar rooms 107,108, A3 lecture Hall - D3 building, Szaflarski Lecture Hall C3 building	
18. Location and time for contact hours	seminar rooms 107,108 D3 building time : after seminars and classes, or by e-mails with topic teacher responsible	
19. Learning outcomes		
Number of the course learning outcome	Course learning outcomes	Reference to learning outcomes indicated in the standards
	in terms of knowledge, the graduate knows and understands	
P_W01 / C_K01	individual groups of therapeutic agents	C.W35.
P_W02 / C_K02	the main mechanisms of drug action and their age-dependent changes in the body system	C.W36.
P_W03 / C_K03	influence of disease processes on metabolism and elimination of drugs	C.W37.
P_W04 / C_K04	basic principles of pharmacotherapy	C.W38.
P_W05 / C_K05	major drug side effects, including those arising from their interactions	C.W39.
P_W06 / C_K06	the problem of drug resistance, including multi-drug resistance	C.W40.
P_W07 / C_K07	indications for genetic tests carried out to individualize pharmacotherapy	C.W41.
P_W08 / C_K08	basic directions of therapy development, in particular the possibilities of cell, gene and targeted therapy for specific diseases	C.W42.
P_W09 / C_K09	basic concepts in the field of general toxicology	C.W43.
P_W10 / C_K10	groups of drugs whose abuse can lead to poisoning	C.W44.
P_W11 / C_K11	symptoms of the most common intoxications, including alcohol, drugs and other psychoactive substances, heavy metals and selected groups of drugs	C.W45.
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	in terms of skills the graduate can	
P_U01 / C_S01	perform simple pharmacokinetic calculations	C.U13.
P_U02 / C_S02	is able to select drugs in appropriate doses to correct pathological phenomena in the body and in individual organs	C.U14.
P_U03 / C_S03	design patterns of rational chemotherapy for infection, empirical and targeted	C.U15.
P_U04 / C_S04	prepare records of all formulations of medicinal substances	C.U16.
P_U05 / C_S05	use pharmaceutical reference books and databases on medicinal products	C.U17.
P_U06 / C_S06	estimate the toxicological danger in specific age groups and in conditions of liver and kidney failure and prevent drug intoxication	C.U18.
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20. Forms and topics of classes		Number of hours
21.1. Lectures		45
Principles of pharmacology and toxicology		2
Autacoids - characteristic of group		2
Analgesic drugs		2
Autonomic nervous system drugs part I		2
Autonomic nervous system drugs part II		2
Therapy of hypertension		2
Treatment of Congestive Heart Failure and Arrhythmia		2
Antianginal drugs		2
Introduction to the Central Nervous System CNS pharmacology		2
Psychotropic drugs		2
Drugs for Neurodegenerative Diseases		2
Pharmacological management of diabetes mellitus. Thyroid drugs		2
Drugs for Disorders of the Respiratory System		2
The management of the Gastrointestinal tract disorders		2
Drugs of the hematopoietic system		2
Drugs for hyperlipidemia		2
Calcium and phosphate regulation, Carbohydrate metabolism disorders		2
Chemotherapy of microbial diseases part I		2
Chemotherapy of microbial diseases part II		2
Medical genetics		2
Chemotherapy of neoplastic diseases		2
Hormones and anti-hormones		1
Vaccines, vitamins, micronutrients		1
Origin substances in pharmacology		1
22.2. Seminars		40
General principles of pharmacodynamic and pharmacokinetics		3
Practical usage of NSAIDs		3
Opioids, anesthetics, hypnotics and abuse therapy		3
Autonomic nervous system drugs part I		2
Autonomic nervous system drugs part II		2
Hypertension		2
Congestive Heart Failure		2
Myocardial infarction		2
Psychotropic drugs		4
Drugs for disorders of the respiratory system		3
The management of the gastrointestinal tract disorders		3
Drugs for dyslipidemia		2

Drugs of the hematopoietic system	3
General principles of chemotherapy	3
General properties of antineoplastic drugs	3
23.3. Labs	80
Principles of general pharmacology, part 1.	3
Principles of general pharmacology, part 2.	3
Opioids	3
Non-steroidal anti-inflammatory analgesics	3
Autonomic nervous system drugs part I	3
Autonomic nervous system drugs part II	3
Antihypertensive drugs	3
Drugs used in the treatment of coronary heart disease and acute coronary syndromes	3
Antiarrhythmic drugs	3
Psychotropic drugs part I	3
Psychotropic drugs part II	3
Drugs used in respiratory diseases, antitussives: expectorants and secretolytics	3
Drugs used in gastrointestinal diseases	3
Drugs for hyperlipidemia, lipid lowering drugs	3
Drugs for diabetes. Thyroid drugs	3
Drugs used in the hematopoietic system disorders	3
Antineoplastic agents	3
Chemotherapy part I	3
Chemotherapy part II	3
Antimycobacterial drugs	3
Antiviral and antiretroviral drugs	3
Neurodegenerative diseases	3
Clinical toxicology	3
Drugs affecting the endocrine system	3
Anesthetics : preanesthetic medications, general anesthetics	3
Adrenal hormones	1
Hormones and anti-hormones therapies	2
Vaccines, vitamins, micronutrients	1
Origin substances in pharmacology	1
24. Readings	
Major readings Goodman & Gilman's The Pharmacological Basis of Therapeutics Brenner G.M., Stevens C.W., Pharmacology Rang & Dale's Pharmacology Supplemental readings Katzung & Trevor's Pharmacology Examination and Board Review Pharmacology Lippincott Illustrated Reviews	
25. Detail evaluation criteria	
In accordance with the recommendations of the inspection bodies Completion of the course – student has achieved the assumed learning outcomes Detail criteria for completion and evaluation of the course are specified in the course regulations	