

SUBJECT CARD

Faculty of Medicine and Health Sciences

Field of studies: Medicine

Form of studies: Full-time

Degree: long-cycle Master's program

Specializations: No specialization

Academic year: 2022/2023

PHARMACOLOGY II	
SUBJECT	Pharmacology II
NUMBER OF ECTS POINTS	7
LANGUAGE OF INSTRUCTION	English
TEACHER(S)	Professor Tadeusz Krzemiński, MD, PhD Michał Paluch, MD, PhD Tomasz Gawlikowski, MD, PhD
PERSON RESPONSIBLE	Professor Tadeusz Krzemiński, MD, PhD
NUMBER OF HOURS	
LECTURES	38 h
CLASSES	3 h
SEMINARS	64 h
GENERAL OBJECTIVES	
OBJECTIVE 1	<p>The aim of teaching the subject of Pharmacology II is to acquire knowledge about therapeutic possibilities in relation to specific disease entities and clinical situations, including in particular emergencies, life-threatening conditions and poisoning. It is a continuation and extension of the topics of the subject Pharmacology I.</p> <p>The student also learns about the etiopathogenesis, symptoms and diagnostic elements of selected diseases.</p> <p>The student knows how to connect the pathological processes taking place in the body and their symptoms with therapeutic possibilities resulting, among others, from the mechanism of action of drugs.</p> <p>The student should understand the rationale for choosing the use of specific groups of drugs in disease entities.</p> <p>Knowing the effects of drugs, the student should be able to choose the appropriate dosage, predict side effects and demonstrate knowledge of basic drug interactions in a specific clinical situation.</p> <p>The student should be able to plan the treatment of the patient in accordance with the applicable standards (guidelines).</p>

PHARMACOLOGY II	
OBJECTIVE 2	The aim of teaching the subject of Pharmacology II is also the acquisition by the student of basic knowledge on the diagnostic and therapeutic management of a severely poisoned patient.
LEARNING OUTCOMES	
MK1	<p>Knowledge: The student characterizes drugs used in the treatment of selected disease entities and their complications. Lists side effects of drugs used in the treatment of selected disease entities and their complications. Lists contraindications to the use of drugs. He characterizes the interactions between drugs used in the treatment of selected disease entities and their complications.</p>
MK2	<p>Knowledge: The student knows the basic issues concerning the distinctiveness of pharmacotherapy in pregnant women, children and the elderly.</p>
MK3	<p>Knowledge: The student knows the most important toxidromes and specific antidotes.</p>
MS1	<p>Skills: The student uses the pharmaceutical characteristics of medicinal products to plan therapy in selected disease entities.</p>
MS2	<p>Skills: The student has the ability to analyze the side effects of individual drugs. Analyzes drug interactions. Plans treatment with consideration of drug side effects and drug interactions. Plans corrective action in the event of adverse drug reactions.</p>
MS3	<p>Skills: The student knows the principles of subjective and physical examination in a patient poisoned with stimulants or drugs, and is able to plan diagnostics and treatment in such a patient.</p>
INTRODUCTORY REQUIREMENTS	
Basic knowledge of physiology, knowledge acquired during the course of general pharmacology (Pharmacology I) in the winter semester and the scope of internal and other selected diseases.	
COURSE PROGRAM	DETAILED DESCRIPTION OF THE TOPIC BLOCKS
LECTURE 1	Discussion of the rules of classes. Aims and tasks of clinical pharmacology. Drug addiction (drug abuse).
LECTURE 2	Treating shock - anaphylactic, hypovolemic, septic, cardiogenic and neurogenic shock. Management of epileptic and asthmatic states. COPD (<i>chronic obstructive pulmonary disease</i>).
LECTURE 3	Emergency pharmacotherapy in neurology and ophthalmology.
LECTURE 4	Management of syncope. Pharmacotherapy of pain.

PHARMACOLOGY II	
LECTURE 5	Treatment of selected diseases of the gastrointestinal tract and parasitic diseases - treatment algorithms.
LECTURE 6	Management of patients in acute and chronic renal failure. Principles of drug use in chronic kidney disease. Diuretic treatment. Treatment of electrolyte disturbances, acidosis, and metabolic and respiratory alkalosis. Drugs and pregnancy.
LECTURE 7	Coagulation disorders - plasma and vascular bleeding disorders. Oral anticoagulants.
LECTURE 8	Hypertensive, adrenal and thyroid crisis. Principles of management of hypoglycemia and diabetic comas. Practical aspects of drug association in diabetes.
LECTURE 9	Cardiovascular diseases, part 1. Treatment of myocardial infarction. Pharmacotherapy of coronary artery disease and arterial hypertension.
LECTURE 10	Cardiovascular diseases, part 2. Management of sudden cardiac arrest and selected arrhythmias. Treatment of circulatory/cardiovascular failure and pulmonary embolism.
LECTURE 11	Toxicology: Acute diagnostic and therapeutic management with a poisoned patient.
LECTURE 12	Toxicology: Toxydromes.
CLASS 1	Toxicology: Poisoning with natural toxins and selected drugs. Poisoning with alcohols, pesticides, gases, addictive substances.
SEMINAR 1	Drug treatment of infections (Antibiotic therapy part 1, anti-tuberculosis drugs).
SEMINAR 2	Drug treatment of infections (Antibiotic therapy part 2, anti-tuberculosis drugs).
SEMINAR 3	Treating shock - anaphylactic, hypovolemic, septic, cardiogenic and neurogenic shock.
SEMINAR 4	Emergency pharmacotherapy in neurology and ophthalmology. Cancer chemotherapy.
SEMINAR 5	Management of syncope. Pharmacotherapy of pain. Drugs for general and local anaesthesia.
SEMINAR 6	Treatment of selected diseases of the gastrointestinal tract and parasitic diseases - treatment algorithms. Anti-viral drugs, anti-fungal drugs, anti-parasitic drugs. Drugs and pregnancy.

PHARMACOLOGY II	
SEMINAR 7	Management of patients in acute and chronic renal failure. Principles of drug use in chronic kidney disease. Diuretic treatment. Treatment of electrolyte disturbances, acidosis, and metabolic and respiratory alkalosis.
SEMINAR 8	Coagulation disorders - plasma and vascular bleeding disorders. Oral anticoagulants. Pharmacotherapy of anaemia.
SEMINAR 9	Hypertensive, adrenal and thyroid crisis. Steroid therapy. Pharmacotherapy in diseases of the thyroid gland. Principles of management of hypoglycemia and diabetic comas.
SEMINAR 10	Treatment of myocardial infarction. Pharmacotherapy of coronary artery disease and arterial hypertension. Management of sudden cardiac arrest and selected arrhythmias. Treatment of circulatory failure and pulmonary embolism.
SEMINAR 11	Toxicology: Poisoning with natural toxins and selected drugs. Poisoning with alcohols, pesticides, gases, addictive substances.
SEMINAR 12	Credit overdue material.
DIDACTIC METHODS (APPLIED)	
LECTURES	Multimedia presentations, Discussion.
CLASSES	Multimedia presentations, Discussion, Brainstorming, Group work, Problem solving sessions Case study.
SEMINARS	Multimedia presentations, Discussion, Brainstorming, Group work, Problem solving sessions, Case study.
STUDENTS WORKLOAD	
NUMBER OF HOURS UNDER SUPERVISION	Hours resulting from the study plan (lectures + seminars + exercises): 105 hours
NUMBER OF PREPARATION HOURS	Preparation for classes, including studying obligatory and recommended literature: 105 hours
TOTAL NUMBER OF HOURS FOR THE COURSE	210 hours

PHARMACOLOGY II

CLASS REGULATIONS

Attendance at all lectures, classes and seminars is obligatory.
The condition for admission to the exam is passing the seminars.

LECTURES

Presence at lectures is obligatory, and Students will be asked to sign the attendance list each time.

CLASSES

Exercises are obligatory and attendance at each class is checked. Absences from the exercises are not allowed. If it is not possible to do the exercises on a given date, the Student is obliged to do the classes together with another group or individually at the Tutor. The method of conducting the exercises depends on the teacher. The lecturer completes the exercises on the basis of attendance at the classes and the recognition that the contents conveyed during the exercises have been mastered by the student.

SEMINARS

The seminars are compulsory and the attendance at each class is checked. Two excused absences are allowed, which should be immediately excused in the group leader.
The student comes prepared for the seminar, in accordance with the schedule provided and based on the lecture and applicable and recommended textbooks.
The method of conducting the seminar classes depends on the teacher. The tutor checks the students' knowledge of the issues that are the topic of the seminar by assessing each student and entering the grade into the individual student card established for this purpose.
In the event of failure to obtain a credit for the seminar, it is possible to make a retake in the only scheduled date - the seminar to credit the arrears (see schedule).
After completing the course, the grades obtained are the basis for determining the final grade, which is the arithmetic mean of the grades obtained during seminars.
The condition for admission to the exam in the first term is passing all seminars.

Assessment scale used: excellent (6), very good (5), more than good (4.5), good (4), fairly good (3.5), sufficiently (3), insufficiently (2).
Failure to pass due to absence is marked with zero (0).

METHODS OF ASSESMENT

IN TERMS OF KNOWLEDGE

Oral or written tests, single-choice tests conducted during seminars.

IN TERMS OF SKILLS

Checking skills while analyzing the discussed medical cases.

IN TERMS OF SOCIAL COMPETENCY

Activity in classes.

PHARMACOLOGY II

FORMATIVE	<p>Retake test In the event of failing any of the seminars (and consequently not obtaining admission to the exam in the first term), the student must obtain the above-mentioned admission by entering the retake test, which takes place before the exam on the second date (during the retake session). The retake test is conducted orally by the course coordinator. Obtaining a positive result allows the Student to take the exam on the second date. Failure to pass the retake test results in the failure to pass the entire semester.</p>
SUMMATIVE (I & II TERMS)	<p>Exams Due to the unpredictable development of the pandemic, it is assumed that the first and second term exams in Clinical Pharmacology and Toxicology will be conducted orally in a remote form by the teachers.</p>

GRADING SCALE (NOT APPLICABLE IN SUMMER SEMESTER 2020/2021)

3,0 (SATISFACTORY)	60% - 65%
3,5 (SATISFACTORY PLUS)	66% - 70%
4,0 (GOOD)	71% - 80%
4,5 (GOOD PLUS)	81% - 86%
5,0 (VERY GOOD)	87% - 100%

BASIC LITERATURE

- [1] Bertram G. Katzung, Susan B. Masters, Anthony J. Trevor, McGraw-Hill Medical - Basic and Clinical Pharmacology 13e (Int'l Ed);
 [2] Goldfrank's Toxicologic Emergencies, LS Nelson et al., Ninth Edition, New York, 2011, Mc Graw Hill Medical.

SUPPLEMENTARY LITERATURE

- [1] The Pharmacological Basis of THERAPEUTICS thirteenth edition, Laurence L. Brunton [i in.], McGraw-Hill Medical Publishing Division, 2018;
 [2] Drugs Actions etc. Ernst Mutschler [i in.], Medpharm Sc. Publishers 1995 ; 2021 (in press);
 [3] Color Atlas of Pharmacology (translation of Taschenatlas Pharmakologie. Heinz Lüllmann [i in.]. Thieme Verlag, 2017;
 [4] Goldfrank's Toxicologic Emergencies, LS Nelson et al., Ninth Edition, New York, 2011, Mc Graw Hill Medical.