



FOURTH YEAR OF STUDIES

School year 2023/2024.

FUNDAMENTALS OF CLINICAL PHARMACOLOGY

Subject:

FUNDAMENTALS OF CLINICAL PHARMACOLOGY

The course is awarded with 3 ECTS. There are 3 hours of active classes per week (2 hour of lectures and 1 hour of seminars)

TEACHERS AND ASSOCIATES:

RB	Name and surname	E-mail address	Title
1.	Slobodan Janković	sjankovic @ medf.kg.ac.rs	Professor
2 .	Dragan Milovanovic	piki@ptt.rs	Professor
3.	Nataša Đorđević	natashadj2002@yahoo.com	Professor
4.	Jasmina Milovanović	jasminamilo@yahoo.com	Professor
5.	Dejana Ruzic Zecevic	dejana.zecevic@gmail.com	Assistant Professor
6.	Marina Kostić	marrina2006kg@yahoo.com	Professor
7.	Mihajlo Jakovljević	jakovljevicm @ medf.kg.ac.rs	Professor
8.	Radica Zivković Zarić	radica_zivkovic@yahoo.com	Assistant Professor
9.	Miloš Milosavljević	milosavljevicmilos91@gmail.com	Assistant Professor
10.	Ana Pejčić	anapejcic201502@yahoo.com	Assistant Professor

COURSE STRUCTURE:

Module	Name of the module	Week	Lectures weekly	Seminars weekly	Teacher-leader of the module
1	GENERAL CLINICAL PHARMACOLOGY	5	2	1	prof. Dr. Slobodan Janković
2	CLINICAL PHARMACOLOGY OF THE CENTRAL NERVOUS AND CARDIOVASCULAR SYSTEM	5	2	1	prof. Dr. Slobodan Janković
3	CLINICAL PHARMACOLOGY OF OTHER SPECIAL THERAPEUTIC AREAS	5	2	1	prof. Dr. Slobodan Janković
					$\Sigma 30+15=45$

ASSESSMENT:

The student masters the subject in modules. The grade is equivalent to the number obtained points (see tables). Points are earned in two ways:

ACTIVITY DURING THE LESSON: In this way, a student can earn up to 30 points by finding the answer to the therapeutic problem set during previous seminar in publications that meet the criteria of evidence-based medicine; in accordance with the demonstrated success in solving the problem, he/she gets 0-2 points .

FINAL PAPERS FOR MODULES: The student solves the given clinical case in written form. In this way, the student can acquire up to 70 points, according to the attached table. The solution of the clinical case is evaluated with 50% of the available points if it is attempted, with 75% if it is partially correct, and with 100% of the available points if it is completely correct.

MODULE		MAXIMUM POINTS		
		activity during classes	final papers	Σ
1	GENERAL CLINICAL PHARMACOLOGY	10	22	32
2	CLINICAL PHARMACOLOGY OF THE CENTRAL NERVOUS AND CARDIOVASCULAR SYSTEM	10	24	34
3	CLINICAL PHARMACOLOGY OF OTHER SPECIAL THERAPEUTIC AREAS	10	24	34
Σ		30	70	100

The final grade is formed as follows:

In order to pass the whole exam a student must obtain minimum 51 points.

To pass the module a student must:

1. earn more than 50% points on that module

The number of points earned	rating
0 - 50	5
51 - 60	6
61 - 70	7
71 - 80	8
81 - 90	9
91 - 100	10

FINAL PAPERS BY MODULES

MODULE 1.

FINAL PAPER
0-22 POINTS

ASSESSMENT OF THE FINAL PAPER

The solution of the clinical case is evaluated with 50% of the available points if it is attempted, with 75% if it is partially correct, and with 100% of the available points if it is completely correct.

MODULE 2 .

FINAL PAPER
0-24 POINTS

ASSESSMENT OF THE FINAL PAPER

The solution of the clinical case is evaluated with 50% of the available points if it is attempted, with 75% if it is partially correct, and with 100% of the available points if it is completely correct.

MODULE 3.

FINAL PAPER
0-24 POINTS

ASSESSMENT OF THE FINAL PAPER

The solution of the clinical case is evaluated with 50% of the available points if it is attempted, with 75% if it is partially correct, and with 100% of the available points if it is completely correct.

LITERATURE:

MODULE	TITLE OF THE TEXTBOOK	THE AUTHORS	PUBLISHER	LIBRARY	READING ROOM
1. GENERAL CLINICAL PHARMACOLOGY	Clinical pharmacology	Slobodan M. Jankovic	Faculty of Medical Sciences, Kragujevac, 2023	Yes	Yes
	Lippincott Illustrated Reviews: Pharmacology Eight Edition	Karen Whalen	Wolters Kluwer , 2022	Does not have	Does not have
2. CLINICAL PHARMACOLOGY OF THE CENTRAL NERVOUS AND CARDIOVASCULAR SYSTEM	Clinical pharmacology	Slobodan M. Jankovic	Faculty of Medical Sciences, Kragujevac, 2023	Yes	Yes
	Lippincott Illustrated Reviews: Pharmacology Eight Edition	Karen Whalen	Wolters Kluwer , 2022	Does not have	Does not have
3. CLINICAL PHARMACOLOGY OF OTHER SPECIAL THERAPEUTIC AREAS	Clinical pharmacology	Slobodan M. Jankovic	Faculty of Medical Sciences, Kragujevac, 2023	Yes	Yes
	Lippincott Illustrated Reviews: Pharmacology Eight Edition	Karen Whalen	Wolters Kluwer , 2022	Does not have	Does not have

All lectures are available on the website of the Faculty of Medical Sciences: www.medf.kg.ac.rs

THE PROGRAM:

FIRST MODULE: GENERAL CLINICAL PHARMACOLOGY

TEACHING UNIT 1 (FIRST WEEK):

PHARMACOVIGILANCE

lectures 2 hours	seminar 1 hour
<ul style="list-style-type: none">Clinical pharmacology in the health care system.	<ul style="list-style-type: none">Detection and reporting of adverse drug reactions.

TEACHING UNIT 2 (SECOND WEEK):

CLINICAL PHARMACOKINETICS

lectures 2 hours	seminar 1 hour
<ul style="list-style-type: none">Individualization of drug dosing according to pharmacokinetic models	<ul style="list-style-type: none">Therapeutic drug monitoringCalculators for individualizing dosage regimens

TEACHING UNIT 3 (THIRD WEEK):

PHARMACOGENETICS

lectures 2 hours	seminar 1 hour
<ul style="list-style-type: none">The importance of pharmacogenetics for the clinical application of drugs	<ul style="list-style-type: none">Examples of drug administration depending on the patient's pharmacogenetic status

UNIT 4 (FOURTH WEEK):

PHARMACOECONOMICS

lectures 2 hours	seminar 1 hour
<ul style="list-style-type: none">Basics of pharmacoeconomics	<ul style="list-style-type: none">Examples of pharmacoeconomic studiesSelection of drugs based on pharmacoeconomic studies

UNIT 5 (FIFTH WEEK):

RATIONAL PRESCRIBING

lectures 2 hours	seminar 1 hour
<ul style="list-style-type: none">Inappropriate prescribing of drugsPrinciples of rational use of drugs	<ul style="list-style-type: none">The most common errors when prescribing drugs in clinical practice.

SECOND MODULE: CLINICAL PHARMACOLOGY OF THE CENTRAL NERVOUS AND CARDIOVASCULAR SYSTEM

UNIT 6 (SIXTH WEEK):

DRUGS AND THE HEART

lectures 2 hours	seminar 1 hour
<ul style="list-style-type: none">• Prescribing drugs that affect heart rhythm.	<ul style="list-style-type: none">• Treatment of heart failure

UNIT 7 (SEVENTH WEEK):

TREATMENT OF HYPERTENSION

lectures 2 hours	seminar 1 hour
<ul style="list-style-type: none">• Prescribing antihypertensive drugs.	<ul style="list-style-type: none">• Treatment of hypertensive emergency

UNIT 8 (EIGHTH WEEK):

TREATMENT OF VASCULAR DISEASES

lectures 2 hours	seminar 1 hour
<ul style="list-style-type: none">• Prescribing drugs for cerebrovascular diseases	<ul style="list-style-type: none">• Treatment of bacterial endocarditis

UNIT 9 (NINTH WEEK):

TREATMENT OF EPILEPSY

lectures 2 hours	seminar 1 hour
<ul style="list-style-type: none">• Prescribing antiepileptic drugs	<ul style="list-style-type: none">• Termination of status epilepticus

UNIT 10 (TENTH WEEK):

TREATMENT OF PSYCHOSIS AND DEPRESSION

lectures 2 hours	seminar 1 hour
<ul style="list-style-type: none">• Prescribing antipsychotics• Prescribing antidepressants and mood stabilizers	<ul style="list-style-type: none">• Treatment of postoperative delirium in the elderly.

THIRD MODULE: CLINICAL PHARMACOLOGY OF OTHER SPECIAL THERAPEUTIC AREAS

UNIT 11 (ELEVENTH WEEK):

HEMOSTASIS AND ANEMIA

lectures 2 hours	seminar 1 hour
<ul style="list-style-type: none">• Perioperative administration of anticoagulant and antiaggregation drugs.	<ul style="list-style-type: none">• Treatment of anemia

UNIT 12 (Twelfth Week):

IMMUNOSUPPRESSANTS

lectures 2 hours	seminar 1 hour
<ul style="list-style-type: none">• Clinical application of immunosuppressants.	<ul style="list-style-type: none">• Treatment of systemic Lupus erythematoses

UNIT 13 (WEEK THIRTEEN):

ANTIBIOTICS

lectures 2 hours	seminar 1 hour
<ul style="list-style-type: none">• Antibiotic management in the hospital• Principles of rational use of antibiotics	<ul style="list-style-type: none">• Dosing of antibiotics in dialysis patients

UNIT 14 (FOURTEENTH WEEK):

CORTICOSTEROIDS

lectures 2 hours	seminar 1 hour
<ul style="list-style-type: none">• Prescribing corticosteroids	<ul style="list-style-type: none">• Treatment of rheumatoid arthritis

UNIT 15 (FIFTEENTH WEEK):

SEX HORMONES

lectures 2 hours	seminar 1 hour
<ul style="list-style-type: none">• Prescribing sex hormones and antiestrogens	<ul style="list-style-type: none">• Hormone replacement in menopause

Consultations with teachers: every Friday, from 1 to 2 p.m., in the premises of the Department of Pharmacology (rooms 21 and 23)

LECTURE SCHEDULE

**PHARMACOLOGICAL
CLASSROOM**

**FRIDAY
15 : 00 - 16 : 30**

SEMINAR SCHEDULE

**PHARMACOLOGICAL
CLASSROOM**

**WEDNESDAY
16:30 - 17:15**

LESSONS SCHEDULE FOR FUNDAMENTALS OF CLINICAL PHARMACOLOGY COURSE

module	week	date	time	place	type	method unit name	a teacher
1	1	24.11.2023.	15:00-16:30	PhClass	L	Clinical pharmacology in the health care system.	Prof. Slobodan Janković
1	1	24.11.2023.	16:30-17:15	PhClass	S	Detection and reporting of adverse drug reactions.	Prof. Slobodan Janković
1	2	1.12.2023.	15:00-16:30	PhClass	L	Individualization of drug dosing according to pharmacokinetic models	Prof. Jasmina Milovanović
1	2	1.12.2023.	16:30-17:15	PhClass	S	Therapeutic drug monitoring Calculators for individualizing dosage regimens	Prof. Jasmina Milovanović
1	3	8.12.2023.	15:00-16:30	PhClass	L	The importance of pharmacogenetics for the clinical application of drugs	Prof. Nataša Đorđević
1	3	8.12.2023.	16:30-17:15	PhClass	S	Examples of drug administration depending on the patient's pharmacogenetic status	Prof. Nataša Đorđević
1	4	15.12.2023.	15:00-16:30	PhClass	L	Basics of pharmacoeconomics	Prof. Dragan Milovanovic
1	4	15.12.2023.	16:30-17:15	PhClass	S	Examples of pharmacoeconomic studies Selection of drugs based on pharmacoeconomic studies	Prof. Dragan Milovanovic
1	5	22.12.2023.	15:00-16:30	PhClass	L	Inappropriate prescribing of drugs Principles of rational use of medicines	Prof. Mihajlo Jakovljević

LESSONS SCHEDULE FOR FUNDAMENTALS OF CLINICAL PHARMACOLOGY COURSE

module	week	date	time	place	type	method unit name	a teacher
1	5	22.12.2023.	16:30-17:15	PhClass	S	The most common errors when rescribing drugs in clinical practice	Assist . Prof. Radica Zivković Zarić
		22.12.2023.	17:15-18:00	PhClass	FP	FINAL PAPER OF MODULE 1 - prof. Slobodan Janković	
2	6	29.12.2023.	15:00-16:30	PhClass	L	Prescribing drugs that affect heart rhythm.	Prof. Marina Kostić
2	6	29.12.2023.	16:30-17:15	PhClass	S	Treatment of heart failure	Prof. Marina Kostić
3	15	29.12.2023.	17:15-18:45	PhClass	L	Prescribing sex hormones and antiestrogens	Prof. Marina Kostić
3	15	29.12.2023.	18:45-19:30	PhClass	S	Hormone replacement in menopause	Prof. Marina Kostić
2	7	12.1.2024.	15:00-16:30	PhClass	L	Prescribing antihypertensive drugs.	Assist. Prof. Dejana Ružić-Zečević

LESSONS SCHEDULE FOR FUNDAMENTALS OF CLINICAL PHARMACOLOGY COURSE

module	week	date	time	place	type	method unit name	a teacher
2	7	12.1.2024.	16:30-17:15	PhClass	S	Treatment of hypertensive emergency	Assist. Prof. Dejana Ružić-Zečević
2	8	12.1.2024.	17:15-18:45	PhClass	L	Prescribing drugs for cerebrovascular diseases	Assist . Prof. Radica Zivković Zarić
2	8	12.1.2024.	18:45-19:30	PhClass	S	Treatment of bacterial endocarditis	Assist . Prof. Radica Zivković Zarić
2	9	19.1.2024.	15:00-16:30	PhClass	L	Prescribing antiepileptic drugs	Prof. Jasmina Milovanović
2	9	19.1.2024.	16:30-17:15	PhClass	S	Termination of status epilepticus.	Prof. Jasmina Milovanović
2	10	19.1.2024.	17:15-18:45	PhClass	L	Prescribing antipsychotics Prescribing antidepressants and mood stabilizers	Assist. Prof. Ana Pejčić
2	10	19.1.2024.	18:45-19:30	PhClass	S	Treatment of postoperative delirium in the elderly.	Assist. Prof. Ana Pejčić
		19.1.2024.	19:30-20:15	PhClass	FP	FINAL PAPER OF MODULE 2 - prof. Slobodan Janković	

LESSONS SCHEDULE FOR FUNDAMENTALS OF CLINICAL PHARMACOLOGY COURSE

module	week	date	time	place	type	method unit name	a teacher
3	11	26.1.2024.	15:00-16:30	PhClass	L	Perioperative administration of anticoagulant and antiaggregation drugs.	Assist. Prof. Dejana Ružić-Zečević
3	11	26.1.2024.	16:30-17:15	PhClass	S	Treatment of anemia	Assist. Prof. Ana Pejčić
3	12	26.1.2024.	17:15-18:45	PhClass	L	Prescribing immunosuppressants.	Assist Prof Miloš Milosavljević
3	12	26.1.2024.	18:45-19:30	PhClass	S	Treatment of systemic Lupus erythematoses	Assist Prof Miloš Milosavljević
3	13	2.2.2024.	15:00-16:30	PhClass	L	Antibiotic management in the hospital Principles of rational use of antibiotics	Prof. Mihajlo Jakovljević
3	13	2.2.2024.	16:30-17:15	PhClass	S	Dosing of antibiotics in dialysis patients .	Assist Prof Miloš Milosavljević
3	14	2.2.2024.	17:15-18:45	PhClass	L	Prescribing corticosteroids	Prof. Nataša Đorđević
3	14	2.2.2024.	18:45-19:30	PhClass	S	Treatment of rheumatoid arthritis	Prof. Nataša Đorđević

LESSONS SCHEDULE FOR FUNDAMENTALS OF CLINICAL PHARMACOLOGY COURSE

module	week	date	time	place	type	method unit name	a teacher
		2.2.2024.	19:30-20:30	PhClass	FP	FINAL PAPER OF MODULE 3 - prof. Slobodan Janković	