



**INTEGRATED ACADEMIC
PHARMACY STUDIES**

SECOND YEAR OF STUDY

academic 2023/2024.

**INTRODUCTION TO
PHARMACEUTICAL PRACTICE**

Course:

INTRODUCTION TO PHARMACEUTICAL PRACTICE

The course is evaluated with 5 ECTS credits. It consists of 4 hours of active teaching per week (2 hours of lectures, 1 hour of other active classes and 1 hour of work in a small group).

TEACHERS AND ASSOCIATES:

	Name and surname	E-mail	Title
1.	Milena Jurisevic	milena.jurisevic@medf.kg.ac.rs	Assistant professor
2.	Olivera Milovanovic	olivera.milovanovic@medf.kg.ac.rs	Associate professor
3.	Tamara Nikolic Turnic	tamara.nikolic@medf.kg.ac.rs	Associate professor
4.	Srdjan Stefanovic	sstefanovic@medf.kg.ac.rs	Associate professor
5.	Radisa Pavlovic	r.pavlovic2407@gmail.com	Assistant professor
6.	Aleksandra Stojanovic	vranicaleksandra90@gmail.com	Assistant professor
7.	Marko Ravic	markoravic@hotmail.com	Assistant
8.	Katarina Djordjevic	kacka96kg@gmail.com	Assistant trainee
9.	Bozidar Pindovic	pindovic.bozidar@gmail.com	Assistant trainee
10.	Natasa Mijailovic	nacakg@gmail.com	Assistant (PhD)

COURSE STRUCTURE:

Module	Module name	Week	Lectures	Other active classes	Work in a small group	Teacher-supervisor module
1	Introduction to pharmacy	5	2	1	1	Milena Jurisevic
2	Medication therapy management	5	2	1	1	Milena Jurisevic
3	Perspectives in pharmacy practice	5	2	1	1	Milena Jurisevic
						$\Sigma 30+15+15=60$

EVALUATION:

The student overcomes the course based on the points achieved in the pre-examination activities and the final exam. The score is equivalent to the number of gained points (table). Points are earned as follows:

Activity during classes: The student can gain up to 30 points by taking 2 exam question from that week, answering and receiving 0-2 points in accordance with the demonstrated knowledge.

Final exam: The student can gain up to 70 points. The student answers 5 exam questions (oral examination) (each question 0-14 points).

Module		MAXIMUM POINTS		
		Activity during classes	Final exam	Σ
1	Introduction to pharmacy	10		
2	Medication therapy management	10		
3	Perspectives in pharmacy practice	10		
	Final exam (oral examination)		70	70
Σ		30	70	100

Final grade is formed as follows:

In order to pass the course, student must gain a minimum of 51 points.

To pass the module, the student must achieve more than 50% of the maximal number of points for the module.

To pass the Final exam (oral examination), the student must achieve more than more 50% points.

The final grade will be formed according to the following table:

Grading system		
Grade	Total No of points	Description
10	91-100	Excellent
9	81-90	Exceptionally good
8	71-80	Very good
7	61-70	Good
6	51-60	Passing
5	< 51	Failing

Literature:

Title	Authors	Publisher	LIBRARY
The Science and Practice of Pharmacy.	Troy,B.David (editor). Remington:	Philadelphia:Lippincot Williams&Wilkins. 2006.	
Basic and Clinical Pharmacology.	Katzung B.	New York:McGraw-Hill,Inc. 2004.	
Hospital Pharmacy.	Stephens, Martin	London:Pharmaceutical Press. 2003.	
Pharmaceutical practice.	A.J.Winfield.	Edinburgh: Churchill Livingstone. 1998..	
. Drug Information: A Guide for Pharmacists,	Malone P, Malone M, Park S	6th Edition. McGraw Hill. 2017	

THE PROGRAM:

MODULE 1: INTRODUCTION TO PHARMACY

TEACHING UNIT 1 (FIRST WEEK):

Lectures 2 hours and 1 hour of other active classes	Practical classes: 1 hour
Introduction to pharmacy Brief history of pharmacy	Introduction to pharmacy Brief history of pharmacy

TEACHING UNIT 2 (SECOND WEEK):

Lectures 2 hours and 1 hour of other active classes	Practical classes: 1 hour
Organization of health care system in Republic of Serbia and European Union	Organization of health care system in Republic of Serbia and European Union

TEACHING UNIT 3 (THIRD WEEK):

Lectures 2 hours and 1 hour of other active classes	Practical classes: 1 hour
Community pharmacy, clinical pharmacy and hospital pharmacy	Role of pharmacist in healthcare delivery

TEACHING UNIT 4 (FOURTH WEEK):

Lectures 2 hours and 1 hour of other active classes	Practical classes: 1 hour
Good pharmacy practice in community pharmacy settings	Principles of communications pharmacist- patient

TEACHING UNIT 5 (FIFTH WEEK):

Lectures 2 hours and 1 hour of other active classes	Practical classes: 1 hour
Good pharmacy practice in hospital pharmacy settings	New dimensions of pharmacy practice and care

MODULE 2: MEDICATION THERAPY MANAGEMENT

TEACHING UNIT 6 (SIXTH WEEK):

Lectures 2 hours and 1 hour of other active classes	Practical classes: 1 hour
Medicines and their preparation	Calculations in pharmacy practice

TEACHING UNIT 7 (SEVENTH WEEK):

Lectures 2 hours and 1 hour of other active classes	Practical classes: 1 hour
OTC medicine	OTC medicine

TEACHING UNIT 8 (EIGHTH WEEK):

Lectures 2 hours and 1 hour of other active classes	Practical classes: 1 hour
Basics of radiopharmacy, preparing of cytotoxic drugs and radiopharmaceuticals.	Basics of radiopharmacy, preparing of cytotoxic drugs and radiopharmaceuticals.

TEACHING UNIT 9 (NINTH WEEK):

Lectures 2 hours and 1 hour of other active classes	Practical classes: 1 hour
Biotherapeutics	MAB, biogenerics, biobetters, biosimilar

TEACHING UNIT 10 (TENTH WEEK):

Lectures 2 hours and 1 hour of other active classes	Practical classes: 1 hour
Basics of therapeutic drug monitoring	Basics of therapeutic drug monitoring

MODULE 3: PERSPECTIVES IN PHARMACY PRACTICE

TEACHING UNIT 11 (ELEVENTH WEEK):

Lectures 2 hours and 1 hour of other active classes	Practical classes: 1 hour
Organization of preclinical and clinical trials	Organization of preclinical and clinical trials

TEACHING UNIT 12 (TWELVE WEEK):

Lectures 2 hours and 1 hour of other active classes	Practical classes: 1 hour
Randomized clinical trials and evidence based medicine	Randomized clinical trials and evidence based medicine

TEACHING UNIT 13 (THIRTEENTH WEEK):

Lectures 2 hours and 1 hour of other active classes	Practical classes: 1 hour
Introduction to pharmacoconomics, pharmacogenomic and pharmacoepidemiology	Introduction to pharmacoconomics, pharmacogenomic and pharmacoepidemiology

TEACHING UNIT 14 (FOURTEENTH WEEK):

Lectures 2 hours and 1 hour of other active classes	Practical classes: 1 hour
Introduction to pharmacovigilance and drug safety	Introduction to pharmacovigilance and drug safety

TEACHING UNIT 15 (FIFTEENTH WEEK):

Lectures 2 hours and 1 hour of other active classes	Practical classes: 1 hour
Repetition and consolidation of previous material	Repetition and consolidation of previous material

LECTURE SCHEDULE

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PRACTICE SCHEDULE

TEACHING SCHEDULE FOR THE COURSE INTRODUCTION TO PHARMACEUTICAL PRACTICE

module	week	date	time	place	type	the name of the method unit	teacher	
1	1				L OAC	Introduction to pharmacy Brief history of pharmacy	Milena Jurisevic, <i>Lecturer</i>	
					P	Introduction to pharmacy Brief history of pharmacy	Marko Ravic Natasa Mijailovic Katarina Djordjevic Bozidar Pindovic	
	2				L OAC	Organization of health care system in Republic of Serbia and European Union	Olivera Milovanovic, <i>Lecturer</i>	
					P	Organization of health care system in Republic of Serbia and European Union	Marko Ravic Natasa Mijailovic Katarina Djordjevic Bozidar Pindovic	
	3				L OAC	Community pharmacy, clinical pharmacy and hospital pharmacy	Srdjan Stefanovic, <i>Lecturer</i>	
					P	Role of pharmacist in healthcare delivery	Marko Ravic Natasa Mijailovic Katarina Djordjevic Bozidar Pindovic	
	4				L OAC	Good pharmacy practice in community pharmacy settings	Milena Jurisevic, <i>Lecturer</i>	
					P	Principles of communications pharmacist- patient	Marko Ravic Natasa Mijailovic Katarina Djordjevic Bozidar Pindovic	
	5				L OAC	Good pharmacy practice in hospital pharmacy settings	Aleksandra Stojanovic, <i>Lecturer</i>	
					P	New dimensions of pharmacy practice and care	Marko Ravic Natasa Mijailovic Katarina Djordjevic Bozidar Pindovic	
	2	6				L OAC	Medicines and their preparation	Milena Jurisevic, <i>Lecturer</i>

TEACHING SCHEDULE FOR THE COURSE INTRODUCTION TO PHARMACEUTICAL PRACTICE

module	week	date	time	place	type	the name of the method unit	teacher
					P	Calculations in pharmacy practice	Marko Ravic Natasa Mijailovic Katarina Djordjevic Bozidar Pindovic
	7				L OAC	OTC medicine	Aleksandra Stojanovic, <i>Lecturer</i>
					P	OTC medicine	Marko Ravic Natasa Mijailovic Katarina Djordjevic Bozidar Pindovic
	8				L OAC	Basics of radiopharmacy, preparing of cytotoxic drugs and radiopharmaceuticals	Srdjan Stefanovic, <i>Lecturer</i>
					P	Basics of radiopharmacy, preparing of cytotoxic drugs and radiopharmaceuticals	Marko Ravic Natasa Mijailovic Katarina Djordjevic Bozidar Pindovic
	9				L OAC	Biotherapeutics	Milena Jurisevic, <i>Lecturer</i>
					P	MAB, biogenerics, biobetters, biosimilar	Marko Ravic Natasa Mijailovic Katarina Djordjevic Bozidar Pindovic
	10				L OAC	Basics of therapeutic drug monitoring	Olivera Milovanovic, <i>Lecturer</i>
					P	Basics of therapeutic drug monitoring	Marko Ravic Natasa Mijailovic Katarina Djordjevic Bozidar Pindovic
3	11				L OAC	Organization of preclinical and clinical trials	Tamara Nikolic Turnic, <i>Lecturer</i>
					P	Organization of preclinical and clinical trials	Marko Ravic Natasa Mijailovic Katarina Djordjevic Bozidar Pindovic

TEACHING SCHEDULE FOR THE COURSE INTRODUCTION TO PHARMACEUTICAL PRACTICE

module	week	date	time	place	type	the name of the method unit	teacher
	12				L OAC	Randomized clinical trials and evidence based medicine	Tamara Nikolic Turnic, <i>Lecturer</i>
					P	Randomized clinical trials and evidence based medicine	Marko Ravic Natasa Mijailovic Katarina Djordjevic Bozidar Pindovic
	13				L OAC	Introduction to pharmacoconomics, pharmacogenomic and pharmacoepidemiology	Radisa Pavlovic, <i>Lecturer</i>
					P	Introduction to pharmacoconomics, pharmacogenomic and pharmacoepidemiology	Marko Ravic Natasa Mijailovic Katarina Djordjevic Bozidar Pindovic
	14				L OAC	Introduction to pharmacovigilance and drug safety	Radisa Pavlovic, <i>Lecturer</i>
					P	Introduction to pharmacovigilance and drug safety	Marko Ravic Natasa Mijailovic Katarina Djordjevic Bozidar Pindovic
	15				L OAC	Repetition and consolidation of previous material	Milena Jurisevic, <i>Lecturer</i>
					P	Repetition and consolidation of previous material	Marko Ravic Natasa Mijailovic Katarina Djordjevic Bozidar Pindovic
							FINAL EXAM