



**Pharmacy - Integrated academic studies**

**THIRD YEAR - Semester VI**

2023/2024.

**PHARMACEUTICAL ETHICS WITH  
INTERNATIONAL REGULATIVE**

**Name of the course:**

**PHARMACEUTICAL ETHICS WITH INTERNATIONAL REGULATIVE**

The course is evaluated with 5 ECTS. There are 3 hours of active classes per week (1 hour of lectures, 1 hour of practice, and 1 hour of seminar)

## TEACHERS AND ASSOCIATES:

	Name and surname	E-mail address	Academic rank
1.	Branimir Radmanović	biokg2005@yahoo.com	Assistant professor
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23.	Ermin Fetahović	erminfetahovic96@gmail.com	

## Course structure:

Module	Name of the module	Weeks	Lectures	Practice	Seminars	Module Coordinator
1	Pharmaceutical ethics	8	1	1	1	Asst. Prof. Branimir Radmanović
2	History of pharmacy	7	1	1	1	Asst. Prof. Branimir Radmanović
						$\Sigma 15+15 + 15=45$

## Students' knowledge assessment:

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

### EXAM PREREQUISITES:

**Activity during lectures:** In this way, the student can gain up to 30 points by actively participating in the preparation and implementation of the seminar as well as the discussion after the lecture, so depending on the performance, the student gains up to 30 points.

**Seminar:** By creating a written seminar paper, a student can earn up to 10 points. The form, content, way of processing the given topic and the relevance of the data are evaluated. A list of seminar topics will be offered to students at the beginning of the course.

**FINAL EXAM:** Written exam 60 points that include the material of the entire course.

	Points
<b>Pre-exam requirements</b>	<b>40 points</b>
Activity during lectures	30 points
Seminar	10 points
<b>Exam requirements</b>	<b>60 points</b>
Written examination	60 points

In order to pass the exam, the student must achieve more than 50 percent of the points in all forms of teaching.

## Grades:

The student gains a final grade which describes the quality of his knowledge and the results achieved in the course. The interrelation between points and final grades is given in the following table:

Module	Name of the module	Maximum points			
		Activity during lectures	Seminar	Exam	
1	Pharmaceutical ethics	30	10	60	
2	History of pharmacy				
$\Sigma$		30	10	60	100

Num. achieved points	Num. grade	Definition
0 – 50	5	UNSATISFACTORY
51 – 60	6	PASS
61 – 70	7	SATISFACTORY
71 – 80	8	GOOD
81 – 90	9	VERY GOOD
91 – 100	10	EXCELLENT

## LITERATURE:

<b>Textbook</b>	<b>Authors</b>	<b>Publisher</b>	<b>Availability in the library</b>
Core ethics for health professionals.	Phalen R.	Irvin: Springer; 2017.	YES
Principles of biomedical ethics.	Beauchamp TL.	Oxford University Press; 2009.	YES
Dale and Appelbe's Pharmacy Law and ethics.	Appelbe G.	London:Pharmaceutical Press. 2001.	YES

**All lectures (PowerPoint presentations) are available on the website of the Faculty of Medical Science:**  
[www.medf.kg.ac.rs](http://www.medf.kg.ac.rs)

# PROGRAM

## Module 1: Pharmaceutical Ethics

### WEEK 1

#### CONCEPT OF ETHICS, BASIC ETHICAL PRINCIPLES

Lectures (1 hour)	Practice (1 hour)	Seminar (1 hour)
The concept of ethics. Philosophical concepts important for the development of ethics. Prerequisites of moral behavior. Basic ethical principles.	The concept of ethics. Philosophical concepts important for the development of ethics. Prerequisites of moral behavior. Basic ethical principles.	Basic ethical principles.

### WEEK 2

#### HISTORY OF MEDICINE AND PHARMACY

Lectures (1 hour)	Practice (1 hour)	Seminar (1 hour)
Development stages of medicine and pharmacy through time. Hilandar medical codex. History of modern medicine.	Development stages of medicine and pharmacy through time. Hilandar medical codex. History of modern medicine.	Ethical principles and their implementation in pharmacy and biomedicine

### WEEK 3

#### OATHS AND CODES

Lectures (1 hour)	Practice (1 hour)	Seminar (1 hour)
The Hippocratic Oath. Sisterhood Pledge. The concept of codex. Deontology.	The Hippocratic Oath. Sisterhood Pledge. The concept of codex. Deontology.	Code of the pharmaceutical profession.

### WEEK 4

#### ETHICS COMMITTEES OF HEALTHCARE INSTITUTIONS

Lectures (1 hour)	Practice (1 hour)	Seminar (1 hour)
Ethics committees of health institutions. Composition of ethics committees. Selection procedure. Work procedure.	Ethics committees of health institutions. Composition of ethics committees. Selection procedure. Work procedure.	Ethics committees of health institutions: composition, election procedure, work procedure..

### WEEK 5

#### EXPERIMENT IN MEDICINE

Lectures (1 hour)	Practice (1 hour)	Seminar (1 hour)
An experiment in medicine. Legal responsibility of the medical professional. Informed consent for the respondent.	An experiment in medicine. Legal responsibility of the medical professional. Informed consent for the respondent.	Application of placebo - ethical issues.

### WEEK 6

#### ETHICAL CHALLENGES OF ANIMAL RESEARCH

Lectures (1 hour)	Practice (1 hour)	Seminar (1 hour)
Ethical challenges of animal research. Obligations of researchers in their work are experimental animals. Avoiding harm.	Ethical challenges of animal research. Obligations of researchers in their work are experimental animals. Avoiding harm.	Examples of unethical treatment of experimental animals.

### WEEK 7

#### UNETHICAL BEHAVIOUR OF RESEARCHERS

Lectures (1 hour)	Practice (1 hour)	Seminar (1 hour)
Unethical behavior of researchers in pharmacy. Falsification of results. Fabrication of results, Plagiarism.	Unethical behavior of researchers in pharmacy. Falsification of results. Fabrication of results, Plagiarism.	Fraud in science.

### WEEK 8

#### ETHICS OF PRECLINICAL AND CLINICAL DRUG RESEARCH

<b>Lectures (1 hour)</b>	<b>Practice (1 hour)</b>	<b>Seminar (1 hour)</b>
Ethical aspects of preclinical drug research. Ethical aspects of clinical drug research. Legal regulation of preclinical drug research. Legal regulation of clinical drug research.	Ethical aspects of preclinical drug research. Ethical aspects of clinical drug research. Legal regulation of preclinical drug research. Legal regulation of clinical drug research.	Examples of unethically conducted research.



## Module 2: History of Pharmacy

WEEK 9

### INTRODUCTION TO THE HISTORY OF PHARMACY

Lectures (1 hour)	Practice (1 hour)	Seminar (1 hour)
History of pharmacy - definition. Fields of study in the history of pharmacy. Scientific and auxiliary disciplines of importance for the history of pharmacy. Periods during the development of pharmacy.	History of pharmacy - definition. Fields of study in the history of pharmacy. Scientific and auxiliary disciplines of importance for the history of pharmacy. Periods during the development of pharmacy.	The most significant events in the development of pharmacy.

WEEK 10

### PHARMACY AS A HEALTH ACTIVITY THROUGH THE CENTURIES

Lectures (1 hour)	Practice (1 hour)	Seminar (1 hour)
Pharmacy as a health activity throughout the centuries.	Pharmacy as a health activity throughout the centuries.	The development of the pharmacist's role over time.

WEEK 11

### THE MOST IMPORTANT DISCOVERY SIGNIFICANT FOR THE DEVELOPMENT OF PHARMACY

Lectures (1 hour)	Practice (1 hour)	Seminar (1 hour)
History of drug development. Different approaches in drug design. New therapeutic possibilities.	History of drug development. Different approaches in drug design. New therapeutic possibilities.	Accidental discoveries in pharmacy (pharmaceutical research).

WEEK 12

### HISTORY OF DRUG DEVELOPMENT

Lectures (1 hour)	Practice (1 hour)	Seminar (1 hour)
Ethics of advertising in pharmacy. Modern pharmacy. Dictionary of terms used in pharmacy.	Ethics of advertising in pharmacy. Modern pharmacy. Dictionary of terms used in pharmacy.	Examples of advertising in pharmacy - good and bad practice.

WEEK 13

### PHARMACIST AND SOCIETY

Lectures (1 hour)	Practice (1 hour)	Seminar (1 hour)
Pharmacist and society. Moral characteristics of pharmaceutical health care.	Pharmacist and society. Moral characteristics of pharmaceutical health care.	Development of pharmacy.

WEEK 14

### THE ROLE OF THE PHARMACIST IN WORKING WITH SENSITIVE GROUPS

Lectures (1 hour)	Practice (1 hour)	Seminar (1 hour)
Special aspects in working with sensitive groups.	Special aspects in working with sensitive groups.	Ethical challenges in working with sensitive groups of patients

WEEK 15

### ETHICAL ASPECTS OF THE PANDEMIC COVID-19

Lectures (1 hour)	Practice (1 hour)	Seminar (1 hour)
Ethical aspects of the end of life. Euthanasia. Ethical issues of the Covid 19 pandemic.	Ethical aspects of the end of life. Euthanasia. Ethical issues of the Covid 19 pandemic.	Ethical aspects of the end of life. Euthanasia. Ethical issues of the Covid 19 pandemic.

## **SCHEDULE OF LECTURES**



## **SCHEDULE OF PRACTICE**



## LESSON SCHEDULE FOR THE COURSE PHARMACEUTICAL ETHICS WITH INTERNATIONAL REGULATIVE

модул	недеља	тип	назив методске јединице	наставник
			<b>MODULE 1</b>	
1	1	<b>L</b>	Concept of ethics. Basic ethical principles. Prerequisites of moral behavior.	Prof. dr D. Ignjatović Ristić Doc. dr B. Radmanović
1	1	<b>P</b>	Concept of ethics. Basic ethical principles. Prerequisites of moral behavior.	Prof. dr D. Ignjatović Ristić Doc. dr B. Radmanović
1	1	<b>S</b>	Basic ethical principles.	Ass. M. Đorđić Ass. N. Murić, Sar. S.Veselinović
1	2	<b>L</b>	History of medicine and pharmacy	Prof. dr D. Đurić
1	2	<b>P</b>	History of medicine and pharmacy	Prof. dr D. Đurić
1	2	<b>S</b>	Ethical principles and their implementation in pharmacy and biomedicine.	Ass. M. Đorđić Ass. K. Nikić-Đuričić Sar. E. Fetahović
1	3	<b>L</b>	Oaths and codes	Prof. dr V. Janjić
1	3	<b>P</b>	Oaths and codes	Prof. dr V. Janjić
1	3	<b>S</b>	Code of the pharmaceutical profession	Ass. M. Đorđić Sar. S.Veselinović
1	4	<b>L</b>	Ethics committees of health institutions: composition, election procedure, work procedure.	Prof. dr B. Vuletić
1	4	<b>P</b>	Ethics committees of health institutions: composition, election procedure, work procedure.	Prof. dr B. Vuletić
1	4	<b>S</b>	Ethics committees of health institutions: composition, election procedure, work procedure.	Ass. A. Kočović Ass. S. Čolović Sar. E. Fetahović

1	5	<b>L</b>	Experiment in medicine, legal responsibility of the medical worker, legal and ethical problems.	Prof. dr D. Milovanović Prof. dr O. Milovanović
1	5	<b>P</b>	Experiment in medicine, legal responsibility of the medical worker, legal and ethical problems.	Prof. dr D. Milovanović Prof. dr O. Milovanović
1	5	<b>S</b>	Application of placebo - ethical issues	Ass. A. Kočović Ass. K. Nikić-Đuričić Sar. S.Veselinović
1	6	<b>L</b>	Ethical challenges of animal research.	Prof. dr G. Rosić Prof. dr D. Selaković
1	6	<b>P</b>	Ethical challenges of animal research.	Prof. dr G. Rosić Prof. dr D. Selaković
1	6	<b>S</b>	Examples of unethical treatment of experimental animals.	Ass. M. Đorđić Ass. S. Čolović Sar. E. Fetahović
1	7	<b>L</b>	Unethical behavior of researchers in pharmacy	Prof. dr S. Janković
1	7	<b>P</b>	Unethical behavior of researchers in pharmacy	Prof. dr S. Janković
1	7	<b>S</b>	Fraud in science.	Ass. A. Kočović Ass. N. Murić Sar. S.Veselinović
1	8	<b>L</b>	Ethical aspects and legal regulation of preclinical and clinical drug research.	Doc. dr B. Radmanović Prof. dr V. Janjić
1	8	<b>P</b>	Ethical aspects and legal regulation of preclinical and clinical drug research.	Doc. dr B. Radmanović Prof. dr V. Janjić
1	8	<b>S</b>	Examples of unethically conducted research.	Ass. M. Đorđić Ass. K. Nikić-Đuričić Sar. E. Fetahović
			<b>MODULE 2</b>	
2	9	<b>L</b>	Introduction to the history of pharmacy. The most important discoveries significant for the development of pharmacy.	Doc. dr A. Bukonjić

2	9	<b>P</b>	Introduction to the history of pharmacy. The most important discoveries significant for the development of pharmacy.	Doc. dr A. Bukonjić
2	9	<b>S</b>	The most significant events in the development of pharmacy.	Ass. A. Kočović Ass. S. Čolović Sar. S.Veselinović
2	10	<b>L</b>	Pharmacy as a health activity throughout the centuries.	Prof. dr G. Mihajlović
2	10	<b>P</b>	Pharmacy as a health activity throughout the centuries	Prof. dr G. Mihajlović
2	10	<b>S</b>	The development of the pharmacist's role over time.	Ass. D. Đoković Ass. M. Đorđić Sar. E. Fetahović
2	11	<b>L</b>	History of drug development, different approaches in drug design and new therapeutic possibilities.	Prof. dr M. Borovčanin
2	11	<b>P</b>	History of drug development, different approaches in drug design and new therapeutic possibilities.	Prof. dr M. Borovčanin
2	11	<b>S</b>	Accidental discoveries in pharmacy (pharmaceutical research).	Ass. M. Đorđić Ass. N. Murić Sar. S.Veselinović
2	12	<b>L</b>	Ethics in pharmaceutical advertising.	Doc. dr A. Bukonjić
2	12	<b>P</b>	Ethics in pharmaceutical advertising.	Doc. dr A. Bukonjić
2	12	<b>S</b>	Examples of advertising in pharmacy - good and bad practice	Ass. A. Kočović Ass. N. Murić Sar. E. Fetahović
2	13	<b>L</b>	Pharmacist and society. Moral characteristics of pharmaceutical health care.	Prof. dr O. Milovanović
2	13	<b>P</b>	Pharmacist and society. Moral characteristics of pharmaceutical health care.	Prof. dr O. Milovanović
2	13	<b>S</b>	Development of pharmacy.	Ass. A. Kočović Ass. S. Čolović Sar. S.Veselinović
2	14	<b>L</b>	The role of pharmacists in working with vulnerable groups.	Prof. dr M. Jovanović

2	14	<b>P</b>	The role of pharmacists in working with vulnerable groups.	Prof. dr M. Jovanović
2	14	<b>S</b>	Ethical challenges in working with sensitive groups of patients.	Ass. M. Đorđić Ass. K. Nikić-Đuričić Sar. E. Fetahović
2	15	<b>L</b>	Ethical aspects of the end of life. Euthanasia. Ethical issues of the Covid 19 pandemic.	Prof. dr D. Ignjatović Ristić Doc. dr B. Radmanović
2	15	<b>P</b>	Ethical aspects of the end of life. Euthanasia. Ethical issues of the Covid 19 pandemic.	Prof. dr D. Ignjatović Ristić Doc. dr B. Radmanović
2	15	<b>S</b>	Ethical aspects of the end of life. Euthanasia. Ethical issues of the Covid 19 pandemic.	Ass. A. Kočović Ass. M. Đorđić Sar. S.Veselinović
		<b>FT</b>	<b>FINAL TEST</b>	
		<b>E</b>	<b>EXAM</b>	