Faculty of Medicine in Rijeka

Curriculum
2026/2027

For course

Toxicology

Study program:	**Medical Studies in English (R)** (elective) University integrated undergraduate and graduate study
Department:	**Department of Basic and Clinical Pharmacology and Toxicology**
Course coordinator:	**prof. dr. sc. Mršić-Pelčić Jasenka, dr. med.**
Year of study:	**4**
ECTS:	**1.5**
Incentive ECTS:	**0 (0.00%)**
Foreign language:	**Possibility of teaching in a foreign language**

Course information:

The Toxicology course is an optional course in the fourth year of the Integrated Undergraduate and Graduate University Study in Medicine and consists of 25 hours of seminars (1.5 ECTS).

The aim of the course is to train students for active and professional involvement in the processes of monitoring, control and protection against the effects of toxic substances on the human body, as well as on other living beings, and for the prevention and treatment of poisoning; developing a critical approach to the toxicity of certain poisons and potentially toxic substances.

The content of the course is as follows:

Toxicology of drugs; Substances of addiction; Toxicology of food and drinking water: additives and contaminating substances in food and drinking water, drugs in veterinary medicine; Diagnosis and treatment of acute poisoning; Diagnosis and treatment of chronic poisoning; Manifestations of poisoning on target organs - diagnosis and therapy of poisoning: immunotoxicology; toxicology of the respiratory system, liver, kidneys, skin, eye, central nervous system, reproductive and cardiovascular systems; Urgent conditions in toxicology; Peculiarities of treatment of poisoning in children, pregnant women and the elderly; Poisonous plants and animals; Poisoning by marine organisms; Control of biological drugs.

List of assigned reading:

Lu F.: Toxicology: Fundamentals, Target Organs and Risk Assesments, Taylor and Francis, 1996.

List of optional reading:

Timbrell JA: Introduction to toxicology, Taylor & Frances, 2002.

De Matteis F.: Molecular and Cellular Mechanisms of Toxicity, Crc Press Inc, 1995.

Casarett & Doulls Toxicology: Basic Science of Poisons, 6. izdanje, 2001.

Curriculum:

Seminars list (with titles and explanation):

S1. Introduction; Paracetamol Poisoning: Mechanisms, Diagnosis and Treatment; Drug-Induced Liver Injury (DILI)

S2. QT Prolongation and Drug-Induced Cardiotoxicity; Serotonin Syndrome and Drug Interactions; Opioiud Toxicity and Overdose

S3. Methotrexate Toxicity; Lithium Toxicity

S4. Drug-Induced Mitochondrial Toxicity; Anticancer Drug Toxicity; Toxicity of Antituberculosis Drugs

S5. Final evaluation and Conclusion

Student obligations:

Students are obliged to attend classes regularly and actively participate in them.

Exam (exam taking, description of the written/oral/practical part of the exam, point distribution, grading criteria):

Written exam, final mark is formed based on the points obtained from the activities at the seminars and the written exam.

Other notes (related to the course) important for students:

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COURSE HOURS 2026/2027

Toxicology

Seminars (Place and time or group)
03.11.2026
S1. Introduction; Paracetamol Poisoning: Mechanisms, Diagnosis and Treatment; Drug-Induced Liver Injury (DILI): • ONLINE (16:00 - 20:00) [172]   ○ Tox
prof. dr. sc. Mršić-Pelčić Jasenka, dr. med. [172]
04.11.2026
S2. QT Prolongation and Drug-Induced Cardiotoxicity; Serotonin Syndrome and Drug Interactions; Opioiud Toxicity and Overdose: • ONLINE (16:00 - 20:00) [172]   ○ Tox
prof. dr. sc. Mršić-Pelčić Jasenka, dr. med. [172]
05.11.2026
S3. Methotrexate Toxicity; Lithium Toxicity: • ONLINE (16:00 - 20:00) [172]   ○ Tox
prof. dr. sc. Mršić-Pelčić Jasenka, dr. med. [172]
06.11.2026
S4. Drug-Induced Mitochondrial Toxicity; Anticancer Drug Toxicity; Toxicity of Antituberculosis Drugs: • ONLINE (16:00 - 20:00) [172]   ○ Tox
prof. dr. sc. Mršić-Pelčić Jasenka, dr. med. [172]
09.11.2026
S5. Final evaluation and Conclusion: • ONLINE (16:00 - 20:00) [172]   ○ Tox
prof. dr. sc. Mršić-Pelčić Jasenka, dr. med. [172]

List of lectures, seminars and practicals:

SEMINARS (TOPIC)	Number of hours	Location
S1. Introduction; Paracetamol Poisoning: Mechanisms, Diagnosis and Treatment; Drug-Induced Liver Injury (DILI)	5	ONLINE
S2. QT Prolongation and Drug-Induced Cardiotoxicity; Serotonin Syndrome and Drug Interactions; Opioiud Toxicity and Overdose	5	ONLINE
S3. Methotrexate Toxicity; Lithium Toxicity	5	ONLINE
S4. Drug-Induced Mitochondrial Toxicity; Anticancer Drug Toxicity; Toxicity of Antituberculosis Drugs	5	ONLINE

S5. Final evaluation and Conclusion	5	ONLINE

EXAM DATES (final exam):