
	<b>UNIVERSITY OF BANJA LUKA</b> <b>FACULTY OF MEDICINE</b>			
	<b>UNDERGRADUATE STUDIES</b>			
	<b>Study Programme of</b>	<b>MEDICINE</b>		
<b>Course Unit Name</b>	<b>Pharmacology with Toxicology</b>			
<b>Type of Course Unit</b>	<b>General Education</b>			
<b>Course Unit Code</b>	<b>Course Unit Status</b>	<b>Semester</b>	<b>Class Workload</b>	<b>Number of ECTS</b>
TO BE DESIGNATED	COMPULSORY	V and VI	V: 3L+2P VI: 3L+2P	12
<b>Members of Staff</b>	Prof. Nataša Stojaković Prof. Svjetlana Stoisavljević Šatara, Prof. Ranko Škrbić, Prof. Miloš Stojiljković, Prof. Lana Nežić, Milica Gajić Bojić and Žana Maksimović			
<b>Eligibility Requirements</b>				<b>Form of Requirements</b>
Course units from the previous year of study must be passed.				As provided by the Rules of Study at the integrated study programme.
<b>Goals of the Course Unit</b>				
<p>The students are to acquire current theoretical knowledge and practical skills in general pharmacology, mechanisms of action, therapeutic and unwanted reactions to medication, methods of delivery, indications and contraindications of the major groups of medication, and knowledge on the pharmacological traits of medication which illustrate individual pharmacodynamic group. Also, they are to adopt the basic principles of toxicology, and the most common acute and chronic poisonings that a physician will possibly encounter in primary health care. The students are also to acquire the skill of writing prescriptions for various types of medication, and the skills and knowledge for properly approaching and using good quality sources of pharmacological literature.</p>				
<b>Learning Outcomes (knowledge acquired):</b>				
<p>Explain general principles of pharmacokinetics and pharmacodynamics; 2. List and describe factors that modify the effect of medication; 3. List the types and explain the mechanisms of interaction of simultaneously applied medication; 4. Classify medicaments into individual groups/subgroups; 5. Explain application, mechanisms of action at the cellular and molecular level, pharmacological effect on different organ systems, major indications, contraindications, unwanted reactions and toxicity of specific medication which are representative of their pharmacotherapeutic groups and subgroups; Identify symptoms and signs of allergic reactions and anaphylaxis, and treatment methods; 6. Describe the clinically most significant medication poisonings and treatment of poisoned patients, as well as other most common acute and chronic poisonings that a physician will possibly encounter in primary health care; 8. List clinically significant medication interaction; 9. Explain the process of research and development of new medication; Master the skill of writing prescriptions for different types of medication, medication application, dosage, registering unwanted reactions to medication, and use of medication registry.</p>				
<b>Contents of the Course Unit:</b>				
<p><b>General pharmacology:</b> basic pharmacological notions, disciplines of pharmacology, development of new medication, mechanisms of action of medication, pharmacokinetics, pharmacogenomics, factors that alter the effect of medication. <b>Special pharmacology:</b> Pharmacodynamics, pharmacokinetics, indications, contraindications and unwanted reactions to the major pharmacological groups of medication, i.e. their individual representatives. <b>Toxicology:</b> Basic principles of toxicology, antidotes, poisoning by medication, pesticides and chemical weapons, heavy metals, caustics, corrosives, poisonous gasses. <b>Pharmacography:</b> legislation and rules on writing prescriptions for different types of medication.</p>				
<b>Teaching Methods:</b>				
<p>The classes are given in the form of lectures, practicals, midterms, office hours, and independent student work</p> <p>Midterm I (subject-matter from semester 1) 18 points</p> <p>Midterm II (subject-matter from semester 2) 18 points</p> <p>Practical test 4 points</p> <p>To take the Final Exam, the students need to have passes the midterms and practical test.</p>				
<b>Literature:</b>				

**Basic literature**

1. K. D. Tripathi. **Essentials of Medical Pharmacology 5th Edition**, Jaypee Brothers Medical Publishers (P) LTD, New Delhi, 2023.
2. Craig W. Stevens. **Brenner and Stevens' Pharmacology 6th Edition – 2022**.

**Additional reading**

1. Gobind and Sparsh, **Review of pharmacology (16th edition)**.

Pre-Exam Duties		Final Exam		Total Points
Attendance	10	Oral / Written	50	100
Midterm (I and II) + practical	40			
Seminar paper				
<b>Note for the Course Unit:</b>				
<b>Syllabus Designer: Prof. Svjetlana Stoisavljević Šatara</b>				

