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**MEDICAL UNIVERSITY PLOVDIV, FACULTY OF PHARMACY**  
**DEPARTMENT OF PHARMACOLOGY, TOXICOLOGY AND PHARMACOTHERAPY, Phone:032/602 498,**  
**15A “V. Aprilov” Blvd.; HEAD OF DEPARTMENT: PROF. L. PEYCHEV, MD, PhD**

**PROGRAMME FOR TOXICOLOGY PHARMACY STUDENTS IV course – LECTURES,**  
**FOR ACADEMIC YEAR 2021/2022 WINTER SEMESTER**

<b>№</b>	<b>DATE</b>	<b>TOPIC</b>	<b>HOURS</b>
1.	21.09.2021	Introduction to Toxicology – a brief history. Basic definitions – poison, poisoning. Types of intoxications – classifications. Current epidemiology of intoxications. Myths, legends and toxicological reality.  Basic terms and processes. Interactions between xenobiotics and organism – toxic aggression and physiological antitoxic defense.	2
2.	28.09.2021	Penetration of xenobiotics in the organism - „gates of entrance” and absorption. The fate of the xenobiotics in the human body. Determinants, influencing the toxicity of the xenobiotics during the phases of absorption, distribution, metabolism, and excretion.	2
3.	05.10.2021	Physiological antitoxic defense (organ and biochemical). Metabolism of xenobiotics (metabolic reactions and enzymes). Metabolic detoxification and bioactivation. Interactions between xenobiotics and enzyme inductors or inhibitors.	2
4.	12.10.2021	Toxic action of xenobiotics (part 1) – mechanisms of the toxic activity and target biomolecules, cells and organs. Cytotoxicity related to free-radical processes, sulfhydryl (-SH) groups, and specific receptor proteins. Changes in the biochemical mechanisms, augmentation of	2
5.	19.10.2021	“Outward” manifestation of poisoning. A practical guide to diagnosis in case of suspected poisoning – basic criteria for evaluation. The role of a pharmacist in case of poisoning or suspected poisoning (“The 10 steps algorithm”)	2
6.	26.10.2021	Toxic action of xenobiotics (part 2) - immunotoxicity, immune suppression, and immune-mediated hypersensitivity. Xenobiotics and allergens. Genotoxicity and genotoxic substances. Carcinogenesis and chemical carcinogens.	2
7.	02.11.2021	Medical antitoxic defense – basic principles and approaches for the treatment of acute and chronic intoxication. Justification of the basic detoxification methods – general and specific.	2
8.	09.11.2021	Drug intoxications – 1 (drugs with CNS activity) – epidemiology, pharmacological and toxicological characteristics, treatment strategy, pharmacological prevention.	2
9.	16.11.2021	Drug intoxications – 2 (anti-inflammatory drugs and analgesics, antihypertensive and cardioactive drugs, etc.) epidemiology, pharmacological and toxicological characteristics, treatment strategy, pharmacological prevention.	2
10.	23.11.2021	Intoxications with alcohols, toxic gases, heavy metals and pesticides - epidemiology, toxicological characteristics, treatment strategy, prevention.	2
11.	30.11.2021	Intoxications with addictive substances and drug addiction. Role of the pharmacist in the prevention of drug abuse and intoxications with controlled psychoactive substances and xenobiotics.	2
12.	07.12.2021	Intoxication with poisons of biologic origin. Anaphylaxis – the potential of the pharmacist in prevention and support.	2
13.	14.12.2021	Drugs used in intoxication treatment – solutions for infusion, organ protective drugs, symptomatic agents. Antidotes – types, mechanism of action, pharmaceutical formulations, application, and delivery.	2
14.	21.12.2021	Management of the toxicological medical treatment. Professional cooperation between the medical specialists and the pharmacist in the health-care system in case of poisoning and drug therapy.	2

23.07.2021

Prepared by: Prof. Y. Iliev, MD, PhD.....

Approved by: Prof. L. Peychev, MD, PhD.....