



Study program: Integrated Academic Studies in Pharmacy			
Course title: Human Health Risk Analysis			
Teacher: Ljilja D. Torović			
Course status: elective			
ECTS Credits: 3			
Condition: /			
Course aim Introduction to the implementation of the risk analysis, training for the interpretation of the results of risk assessment, risk management and communication.			
Expected outcome of the course: <i>Knowledge:</i> Guidelines, recommendations, and tools used in the process of risk analysis. Knowledge in the field of risk assessment and risk management measures. Introduction to the scientific framework for objective comparison of risk and benefit. Getting to know the results of relevant research projects. <i>Skills:</i> Possibility of professional work in the field of risk assessment for human health due to the presence of various chemical substances in food, formulating recommendations for risk reduction and legislation.			
Course description <i>Theoretical education:</i> Risk analysis - the importance and structure of the process. Getting to know the relevant legal, scientific and professional organizations. Food safety law. Risk management. Communication in the risk analysis. Communication with consumers. Risk Assessment. Hazard identification. Hazard characterization. Dose - response relationship. The critical effect. Reference points. The scientific substantiation of the evidence. Biomarkers of exposure and biomarkers of effect. Exposure assessment. Bioavailability. Methods of data collection and food composition and consumption databases. Risk characterization. Margin of safety. Risk benefit analysis: the structure of the process. Cost benefit analysis: natural foods; dietary interventions - food fortification and supplementation; impact of technological processes of food processing. Preventive systems in ensuring food safety. Portals for the international exchange of information on risks related to food. Safety of cosmetic products, borderline products, legislation, product information file. <i>Practical education:</i> Case studies - chemical contaminants in food ; natural toxic substances in food; processing contaminants; food fortification and supplementation. HACCP plan. Cosmetic product information file. Informing consumers about the risks and benefits.			
Literature <i>Compulsory</i> 1. WHO/FAO. Environmental health criteria 240: Principles and methods for the risk assessment of chemicals in food. Geneva: World Health Organization; 2009. Available from: www.who.int . <i>Additional</i> 1. Selected publications (available on internet) of EFSA (www.efsa.europa.eu), EC (ec.europa.eu/food/safety/index_en.htm), WHO (www.who.int), FAO JECFA (www.fao.org), IARC (www.iarc.fr)			
Number of active classes	Theoretical classes: 30		Practical classes: 15
Teaching methods Theoretical and practical; essay.			
Student activity assessment (maximally 100 points)			
Pre-exam activities	points	Final exam	points
Lectures	5	Written	-
Practices	5	Oral	50
Colloquium	-	
Essay	40		