

Course Unit Descriptor

Study Programme: Plant Medicine			
Course Unit Title: Applied Phytopharmacy			
Course Unit Code: 19.FTM043			
Name of Lecturer(s): Full Professor Sanja D. Lazić, Full Professor Maja Meseldžija, Full Professor Slavica Vuković			
Name of Associate(s): Associate Professor Dragana Šunjka, Full Professor Vojislava Bursić, Associate Professor Dušan Marinković			
Type and Level of Studies: Master studies			
Course Status (compulsory/elective): cCompulsory			
Semester (winter/summer): Winter			
Language of instruction: English			
Mode of course unit delivery (face-to-face/distance learning): face-to-face			
Number of ECTS Allocated: 5			
Prerequisites:			
<p>Course Aims: The goal of the course is to gain knowledge about:</p> <ul style="list-style-type: none"> - pesticides, their behavior, application, ways of reaching the soil, water, and plants, their decomposition, and impact on humans and the environment; - assessment of biological effects, possibilities of application of different mixtures of pesticides, pesticides and non-pesticide substances, with the aim of mastering standard methods and analysis of the obtained data. 			
<p>Learning Outcomes: Acquired knowledge about pesticides and their fate in the environment, the method of pesticide application, their impact on humans, will contribute to students' ability to work in the field of the modern application of herbicides, zoocides and fungicides in agricultural production while protecting the environment and in a way that ensures obtaining a health-safe product.</p>			
<p>Syllabus: <i>Theory:</i> New types of pesticide formulations and non-pesticide substances. Pesticides in the environment, pesticides in water, soil and plants, degradation. Risk assessment of pesticide intake. Legislation in the area of plant protection products. Evaluating physical and chemical properties and compatibility of pesticide products. Biological effects of insecticides, fungicides, and herbicides (in crops, vegetables, fruit, viticulture, horticulture, and non-agricultural areas); consequences of pesticide application; strategy in the application of pesticides. Integrated protection, biological control and organic agriculture. <i>Practice:</i> Determining the presence of pesticides in the environment: Determination of pesticide residues, instrumental methods of analysis applied for the determination of pesticide residues, determination of residues of selected pesticides in water, soil and plants. Effects of pesticides and biopesticides on test organisms, analysis of results, protection programs for crops and plantations.</p>			
<p>Required Reading:</p> <ol style="list-style-type: none"> 1. Šovljanski R, Lazić S.: Osnovi fitofarmacije, Poljoprivredni fakultet Novi Sad, 2007. 2. Vitorović, S., Milošević, M, Osnovi toksikologije sa elementima ekotoksikologije, Univerzitet u Beogradu, Beograd, 2002. 3. Tim priređivača: Pesticidi u poljoprivredi i šumarstvu u Srbiji 2018, Društvo za zaštitu bilja Srbije, Beograd, 2018. 4. EPPO Standards, Guidelines for the efficacy evaluation of plant protection products, Vol 1-3, 2004. 5. Copping, L.G.: The Manual of Biocontrol Agents, BCPC, UK, 2009. 6. Kramer, W., Schirmer, U., Jeschke, P., Witschel, M. (2012): Modern Crop Protection Compounds (Herbicides; Fungicides; Insecticides) Second, Revised and Enlarged Edition, Wiley-VCH Verlag & Co. KgaA, Weinheim, Germany. 			
Weekly Contact Hours: 2		Lectures: 2x15=30	Practical work: 2x15=30
Teaching Methods: Lectures, Practical classes, Research work			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	Final exam	points
Active class participation		written exam	70
Practical work			

Preliminary exam(s)			
Seminar(s)	30	oral exam	
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			