

<b>Study Programme: PHYTOMEDICINE</b>			
<b>Course Unit Title: ZOOCIDES</b>			
<b>Course Unit Code:19.FT1011</b>			
<b>Name of Lecturer(s): Ass. Prof. Dušan Marinković,</b>			
<b>Type and Level of Studies: UNDERGRADUATE ACADEMIC STUDIES</b>			
<b>Course Status (compulsory/elective): compulsory</b>			
<b>Semester (winter/summer):summer</b>			
<b>Language of instruction:english, serbia</b>			
<b>Mode of course unit delivery (face-to-face/distance learning):face to face</b>			
<b>Number of ECTS Allocated:4</b>			
<b>Prerequisites:</b> Basics of Phytopharmacy, Agricultural Zoology and Ecology, Outlines of Entomology, Entomofauna of Field and Vegetable Crops, Entomofauna of Fruit Trees and Grapevine, Insect Systematics and Medical Entomology			
<b>Course Aims:</b> Acquiring knowledge on the planned program in the field of chemical insecticides, acaricides, nematocides, avicides, limacides, rodenticides repellents and attractants. Biological control agents, Integrated approach to controlling pests in plant protection.			
<b>Learning Outcomes:</b> Recognition and accomplishment of the main characteristics of the different groups of zoocides. Identification the advantages and disadvantages of the use of each group of zoocides based on understanding of their efficacy against pests as well as their good and weak toxicological and ecotoxicological properties. Impact of zoocides on non-target biota and food chain within agro-eco systems. Implementation of selection/choice of compounds for sound and environmentally acceptable control.			
<b>Syllabus:</b> <i>Theory</i> inorganic compounds, chlorinated hydrocarbons and persistence. Mode of action of insecticides: dinitrophenoles, carbamates, organophosphates, Pyrethrum and Pyrethroids, Insect Growth Regulators (chitin synthesis inhibitors, juvenoids). Neonicotinoids-mode of action. Sterile insect techniques. Bioinsecticides. Prerequisites for effective insect control, mode of action. Causes and ways of resistance development. Acaricides, relationship: predators and mites. Nematocides. Molluscides. Rodenticides. Avicides. Attractants and repellents. <i>Practice</i> Biological evaluation of insecticides (determination of compound LD <sub>50</sub> in the powder formulation, LD <sub>50</sub> for digestive intake (feeding tests). Verification of LT <sub>50</sub> and LD <sub>50</sub> after topical insecticide application. The speed of insecticide action depending on chemical group and mode of ingestion. Verification of insecticide effectiveness of various formulations in soil pests. Verification of insecticidal impact on synanthropic insects. Toxicity and side effects on non-target insects and beneficial entomofauna. Application of different rodenticides classes and their mode of action. The choice of monitoring/surveillance pest methods and their relevance to the control method and the effectiveness degree of chosen suppression treatment.			
<b>Required Reading:</b> Anna Wypych and George Wypych: Databook of Biocides, ChemTec Publishing, Ontario, Canada ISBN: 9781927885048, 2015			
<b>Weekly Contact Hours:</b>	<b>Lectures:4</b>	<b>Practical work:2</b>	
<b>Teaching Methods:</b> Lectures, Practice/ Practical classes, Demonstrations, Consultations			
<b>Knowledge Assessment (maximum of 100 points):</b>			
<b>Pre-exam obligations</b>	points	<b>Final exam</b>	points
Active class participation	5	written exam	
Practical work	5	oral exam	50
Preliminary exam(s)	20	.....	
Seminar(s)	20		
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			

