Biotechnical Faculty / PLANT PRODUCTION / PHYTOPHARMACY

Course:	PHYTOPHARMACY			
Course ID	**Course status**	**Semester**	**ECTS credits**	**Lessons** (Lessons+Exercises+Laboratory)
4807	Mandatory	5	5	3+0+1
Programs	PLANT PRODUCTION			
Prerequisites	None			
Aims	Introducing students to the basic concepts of pesticides, as well as issues related to their application, movement in the environment and the legal basis related to pesticides trade. Also, introduction to pesticide active substances that are on the list of permitted for use in agriculture and other areas. The aim of the course is to instruct students on personal and collective protection in the application of pesticides, as well as measures to be taken in case of their inadequate application.			
Learning outcomes	After passing the exam, the student will acquire knowledge that allows him to: • Define different groups of pesticides with special reference to plant protection products • Know the physical and chemical properties of pesticides and the formulations that are applied • Describe the mechanisms of pesticides action and all the basic groups of fungicides, insecticides and herbicides and active substances that are classified by groups • acquire knowledge on the basic regulations related to plant protection products in the European Union and Montenegro • Choose protective equipment for working with pesticides and know their impact on human health and the environment • Calculate the dose and concentration of applied fungicides, insecticides and herbicides			
Lecturer / Teaching assistant	Prof. dr Nedeljko Latinović Mr Bogoljub Kandić			
Methodology	Lectures, Laboratory practice, Field work, Seminars			
Plan and program of work				
Preparing week	Preparation and registration of the semester			
I week lectures	Introduction. Areas of pesticides application. Plant protection products. Control of vector-borne diseases			
I week exercises	Instructions for the application of plant protection products			
II week lectures	Classification and nomenclature of pesticides			
II week exercises	Calculation of water consumption for treatment			
III week lectures	Physical and chemical properties of pesticides			
III week exercises	Dose and concentration calculation			
IV week lectures	Forms of pesticide formulation. Integrated plant protection			
IV week exercises	Organizing the treatment of field crops			
V week lectures	Mode of action of pesticides			
V week exercises	Organizing the treatment of vegetable crops			
VI week lectures	Mode of action of pesticides			
VI week exercises	Organizing the treatment of vegetable crops			
VII week lectures	Fungicides			
VII week exercises	Organizing orchard treatment			
VIII week lectures	Fungicides, bactericides			
VIII week exercises	Organizing orchard treatment			
IX week lectures	Zoocides			
IX week exercises	Organizing vineyard treatment			
X week lectures	Zoocides. Plant protection products in organic agriculture. Pesticides and bees			
X week exercises	Use of protective equipment			
XI week lectures	Herbicides			
XI week exercises	Handling of devices for application of plant protection products			
XII week lectures	Herbicides			

XII week exercises	Field practice
XIII week lectures	Legal bases of production, trade and application of pesticides
XIII week exercises	Legislation in the field of plant protection products
XIV week lectures	Pre-harvest interval. MRL. Consequences of pesticide application.
XIV week exercises	Field practice
XV week lectures	Pesticide toxicology and first aid.
XV week exercises	Field practice
Student workload	

Per week	**Per semester**
5 credits x 40/30=6 hours and 40 minuts 3 sat(a) theoretical classes 1 sat(a) practical classes 0 excercises **2 hour(s) i 40 minuts** of independent work, including consultations	Classes and final exam: **6 hour(s) i 40 minuts x 16 =106 hour(s) i 40 minuts** Necessary preparation before the beginning of the semester (administration, registration, certification): **6 hour(s) i 40 minuts x 2 =13 hour(s) i 20 minuts** Total workload for the subject: **5 x 30=150 hour(s)** Additional work for exam preparation in the preparing exam period, including taking the remedial exam from 0 to 30 hours (remaining time from the first two items to the total load for the item) **30 hour(s) i 0 minuts** Workload structure: **106 hour(s) i 40 minuts (cources), 13 hour(s) i 20 minuts (preparation), 30 hour(s) i 0 minuts (additional work)**
Student obligations	Students are required to attend classes, do seminar work, do all laboratory and field exercises and do both colloquiums.
Consultations	After the lectures
Literature	1. Šovljanski, Radmila, Lazić, Sanja (2007): Osnovi fitofarmacije, Poljoprivredni fakultet, Novi Sad; Janjić, V. (2005): Fitofarmacija, Društvo zazaštitu bilja Srbije. Beograd - Banja Luka; Šovljanski, Radmila, Klokočar-Schmit, Zlata, Lazić, Sanja (2002): Praktikum iz fitofarmacije, Novi Sad; Vitorović, S., Milošević, M. (2002): Osnovi toksikologije, Univerzitet u Beogradu. Beograd; Čengić-Džomba, S., Drkenda, P., Đikić, M., Gadžo, D., Latinović, N., Mirecki, N., Mirecki S. (2014): Organska proizvodnja. Univerzitet Crne Gore, Biotehnički fakultet Podgorica. Students will be provided with printed material for certain areas.
Examination methods	Activities in lectures and exercises: 5 points Seminar paper: 5 points Two colloquia: 40 points Final exam: 50 points
Special remarks	
Comment	

Grade:	F	E	D	C	B	A
Number of points	less than 50 points	greater than or equal to 50 points and less than 60 points	greater than or equal to 60 points and less than 70 points	greater than or equal to 70 points and less than 80 points	greater than or equal to 80 points and less than 90 points	greater than or equal to 90 points