

<b>Study Programme: Fruit science, Viticulture and Horticulture – module Fruit science and viticulture</b>		
<b>Course Unit Title: Advances in fruit breeding</b>		
<b>Course Unit Code: 19.VI1018</b>		
<b>Name of Lecturer(s): Goran Barać</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: Serbian</b>		
<b>Mode of course unit delivery (face-to-face/distance learning): face-to-face</b>		
<b>Number of ECTS Allocated: 2</b>		
<b>Prerequisites: None</b>		
<b>Course Aims:</b> The goal is to acquire knowledge about the specific breeding goals of certain types of fruit that are adjusted to the requirements of the modern market and in accordance with the goals of the world's leading breeding programs.		
<b>Learning Outcomes:</b> By passing the exam on this course, students should get acquainted with the most important goals, methods and achievements of breeding apple, stone, nut and berry fruit species that make new rootstocks and varieties acceptable for establishing modern production plantations, give them a place in the international market, bring profit to producers and form the foundation of modern fruit growing.		
<b>Syllabus:</b> <i>Theory</i> Special fruit breeding through theoretical classes defines the peculiarities of breeding varieties and rootstocks by fruit species - apple, stone, nut and berry fruit species. Theoretical assumptions of fruit breeding within each species include genetic resources and biodiversity, indigenous germplasm, breeding goals in the context of globalization of production and market internationalization, cytology and cytogenetics, hybridization, spontaneous mutations and clonal selection. <i>Practice</i> Specifics of biological properties of the initial material for selection of varieties and rootstocks, biology of flowering, pollination, fertilization and bearing by fruit species - apple (apple, pear, quince, medlar, hawthorn), stone (plum, peach, apricot, cherry, sour cherry); nutty (walnut, hazelnut, almond, sweet chestnut); berry fruit species (strawberry, raspberry, blackberry, currant, gooseberry). Other forms of teaching: Practical work on stratification and sowing of hybrid seeds, planting and nurturing of hybrid seedlings by fruit species in the selection field. Tests and selection within hybrid offspring. Study research. Preparation and presentation of a seminar work.		
<b>Required Reading: Mišić P. Specijalno oplemenjivanje voćaka. Nolit, Pantenon, Institut za istraživanja u poljoprivredi Srbija, 2002</b>		
<b>Weekly Contact Hours:</b>	<b>Lectures:3</b>	<b>Practical work:2</b>
<b>Teaching Methods:</b> Lectures and Practical classes. The lectures present a theoretical part accompanied by characteristic examples for easier understanding of the material. In addition to lectures, consultations are held regularly. Presentations from		

lectures are available in electronic form. Parts of the material, divided into logical units, can also be taken during the teaching process through a colloquium. Colloquia are taken in writing in the form of a test.

**Knowledge Assessment (maximum of 100 points):**

<b>Pre-exam obligations</b>	points	<b>Final exam</b>	points
Active class participation		written exam	
Practical work		oral exam	60
Preliminary exam(s)	20	Lecture attendance	10
Seminar(s)		Practical classes attendance	10

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