

Study Programme: Fruit growing and Viticulture			
Course Unit Title: Fruit tree biology			
Course Unit Code: 3OBB4014			
Name of Lecturer(s): Branislava R. Gološin; Sandra M. Bijelić			
Type and Level of Studies: Undergraduate academic studies			
Course Status (compulsory/elective): Compulsory			
Semester (winter/summer): summer			
Language of instruction: English			
Mode of course unit delivery (face-to-face/distance learning): Face-to-face			
Number of ECTS Allocated: 6			
Prerequisites: Botany			
Course Aims: Educating and training students in the field of fruit growing. Students should gain basic knowledge of systematics, morphology, ecology, physiology, and propagation of fruit trees.			
Learning Outcomes: Creating professionals with academic education who will have more extensive knowledge compared to knowledge acquired in secondary school. Students should be prepared for further knowledge improvement in the field of fruit growing. The ultimate aim is knowledge application in fruit growing practice.			
Syllabus: <i>Theory</i> Significance of fruit growing. Fruit growing development and production of fruits in the world and at home. Main fruit growing regions in Serbia. Classification of fruit trees and general biological characteristics of particular fruit species. Root system of fruit trees and its function. Above-ground organs of fruit trees and their functions. Trunk. Crown. Fruiting branches of fruit trees. Buds. Leaf. Flower. Fruit. Seed. Lifecycles of fruit trees. Fruit tree productivity. Formation of flower buds. Blooming, pollination, and fertilization of fruit trees. Formation and development of fruits. Fruit tree sterility. Ecology of fruit trees: the relation between fruit trees and soil and climate. The influence of terrain position on fruit trees. Propagation of fruit trees. Generative propagation of fruit trees. Vegetative propagation of fruit trees by: banking up, cuttings, shoots, layering, runnings, and micro-propagation. Grafting (time and method). <i>Practice</i> Fruit organs – presentation of fruit organs: root, root collar, trunk, crown, leaf, buds, flower, fruit, and seed of various fruit species. Recognition of various fruit species according to basic characteristics of one-year-old shoots. Recognition of various fruit species according to basic morphological characteristics of leaves. Fruiting branches of fruit trees. Recognition of fruit seeds of various fruit species. Determination of purity and germination ability of fruit seeds. Demonstration of different methods of vegetative propagation: cuttings, layering, banking up, shoots, and runners. Mastering different methods of fruit tree grafting. Preparation of grafting wax. Micro-propagation of fruit trees – preparation of nutrient medium. Isolating of starting material. Differentiation of fruit buds. Determination of potential productivity.			
Required Reading: 1. Veličković M., Voćarstvo, Poljoprivredni fakultet, Zemun 2002 2. Keserović Z., Korać N., Magazin N., Grugurević V., Gvozdrenović D., Bijelić S., Vračević B., Proizvodnja voća i grožđa na malim površinama, Univerzitet u Novom Sadu, Poljoprivredni fakultet Novi Sad 2008 3. Lučić, P., Đurić Gordana, Mičić, N. Voćarstvo i Institut za istraživanja u poljoprivredi Srbija; Nolit; Partenon 1996 4. Mišić, D. M., Nikolić, D. M. Jagodaste voćke Institut za istraživanja u poljoprivredi Srbija, Čačak, 2003 5. Šoškić, M. Voćarstvo Nauka, Beograd 1991			
Weekly Contact Hours:	Lectures: 4	Practical work: 3	
Teaching Methods: Theoretical classes are conducted in faculty classrooms. Practical classes are conducted in classrooms, laboratory and at the experimental field of the Faculty of Agriculture in Rimski Šancevi.			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	Final exam	points
Lecture attendance	10	oral exam	30
Test	40		
Exercise attendance	10		
Term paper	10		
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			