

Course Unit Descriptor

<b>Study Programme:</b> Agricultural engineering and information systems		
<b>Course Unit Title:</b> Postharvesting systems of perennial plants		
<b>Course Unit Code:</b> 19.PTI044		
<b>Name of Lecturer(s):</b> Aleksandar D. Sedlar, PhD, Full Professor		
<b>Type and Level of Studies:</b> Bachelor degree		
<b>Course Status (compulsory/elective):</b> elective		
<b>Semester (winter/summer):</b> winter		
<b>Language of instruction:</b> English		
<b>Mode of course unit delivery (face-to-face/distance learning):</b> face to face		
<b>Number of ECTS Allocated:</b> 6		
<b>Prerequisites:</b> No		
<b>Course Aims:</b> The aim of the course is to familiarize students with post-harvest technologies, devices and equipment in the processing of perennial crops.		
<b>Learning Outcomes:</b> Students will become familiar with the conditions and methods of storage, calibration and processing of perennial crops. They will learn to choose and optimally use the equipment used for post-harvest manipulation, packaging and processing of fruit, grapes and other perennial products.		
<p><b>Syllabus:</b></p> <p><i>Theory</i></p> <p>Changes during ripening and analysis of fruits before harvest in order to preserve agro-industrial use value. Equipment, devices and machines for harvesting the fruits of perennial crops. Post-harvest treatments and fruit storage conditions. Storage, packaging, sorting and packaging of fruit for market and agro-industry needs. Fruit transport and storage facilities. Cooling tunnels. Control of fruit storage conditions. Classification and calibration of fruits. Grapes as a raw material for wine production. Harvesting, transportation and storage of grapes. Reception of grapes. Equipment for grape processing. Equipment in winemaking and cellaring. Storage and care of wine.</p> <p><i>Practice</i></p> <p>Familiarization with machines, equipment and devices for harvesting fruit and grapes. Review and analysis of equipment and devices for fruit processing. Review and analysis of equipment in winemaking and cellaring. Calculations and optimization of procurement of equipment for fruit and grape processing on family farms. Economic and energy calculations of the processing of products from perennial crops</p>		
<p><b>Required Reading:</b></p> <p>Bugarin R, Bošnjaković A, Sedlar A. 2015. Mašine u voćarstvu i vinogradarstvu, Univerzitet u Novom Sadu – Poljoprivredni fakultet, s. 344, ISBN 978 -86-7520-329-5.</p> <p>Burg P, Zemanek P. 2014. Stroje a zarizeni pri vinarstvu, Agriprint, s. 253, ISBN 978-80-87091.</p> <p>Gvozdrenović D, Davidović M. 1990. Berba i čuvanje voća, Nolit-Beograd, Univerzitetski udžbenik.</p> <p>Kuljančić I. 2007. Vinogradarstvo, Prometej-Novi Sad, Univerzitetski udžbenik.</p> <p>Wills R.B.H, McGlasson W.B, Graham D, Joyce D.C. 2007. Postharvest (5th edition), University of South Wales, Sydney and CABI, Australia, Универзитетски удџбеник.</p>		
<b>Weekly Contact Hours:</b> 4	<b>Lectures:</b> 2	<b>Practical work:</b> 2

**Teaching Methods:**

Oral lectures, Power Point presentations, laboratory measurements, tour of agro-industrial complexes and wine cellars, practical work with equipment for processing products of perennial crops.

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

<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.