

Study Programme: Agricultural engineering and information systems
Course Unit Title: Exploitation of Production Systems
Course Unit Code: 19.PTI032
Name of Lecturer(s): Jan J Turan, PhD, Full Professor
Type and Level of Studies: Bachelor degree
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: 4
Prerequisites: Farming and vegetable growing, Mechanization in farming, Harvesting machines, Tractors, Engines
Course Aims: The goal of the course is for students to become familiar with the methods and ways of exploiting production systems and to recognize the problems of exploitation in the field.
Learning Outcomes: After passing the course, students acquire knowledge that enables proper exploitation and use of production systems in agricultural production.
<p>Syllabus:</p> <p><i>Theory</i></p> <p>Classification and energy properties of working machines and aggregates; Basics for choosing the speed of movement of aggregates; Types and characteristics of machine-tractor aggregates; Methods of calculating the composition of machine-tractor aggregates; Aggregate kinematics; Productivity of machine aggregates; Work productivity and economy of fuel consumption; Optimization of transport systems in agriculture; Optimization of handling and transport systems in agriculture; Optimization of technological and production systems; Basics of the dealer system in agricultural technology; Standardization of work with machine aggregates. Exploitation of aggregates for basic and supplementary soil cultivation; Exploitation of aggregates for fertilization; Exploitation of aggregates for sowing and planting; Exploitation of aggregates for plant care and protection; Exploitation of aggregates for storing hay and silage; Exploitation of aggregates for harvesting and harvesting grain crops; Exploitation of aggregates for extracting sugar beet and potatoes; Exploitation of aggregates for work in fruit growing and viticulture; Exploitation of aggregates for work in livestock production; Exploitation of buildings and plants on the farm.</p> <p><i>Practice</i></p> <p>Preparation of works from the areas covered in the lecture, application of methods of measuring the exploitation indicators of the work of production systems. Solving the problem of optimizing the composition and functioning of individual production systems. Tasks in the field of designing the composition of the system for basic tillage and soil preparation, sowing, fertilizing and application of pesticides as well as harvesting.</p>
<p>Required Reading:</p> <p>Turan, J.: Eksploatacija proizvodnih sistema, Poljoprivredni fakultet, Novi Sad, 2009;</p> <p>Vojvodić, N., Malinović, N., i dr.: Poljoprivredne mašine, Izdavač Nevkoš, Novi Sad, 1998.</p> <p>Lazić, V., Turan, J.: Eksploatacija agregata za osnovnu obradu zemljišta, Poljoprivredni fakultet, 1997.</p>

Weekly Contact Hours: 6	Lectures: 3	Practical work: 3	
Teaching Methods:			
<ul style="list-style-type: none"> - lectures with the use of video presentations and simulations; - demonstration exercises in laboratory and field conditions; - consultations in the field of lectures and exercises; - solving specific problems in the field through calculations, making models and tasks; 			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	Points	Final exam	Points
Active class participation	10	written exam	30
Practical work	20	oral exam	40
Preliminary exam(s)		
Seminar(s)			
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			