

Course Unit Descriptor

Study Programme: Precision agriculture
Course Unit Title: Exploitation and implementation of agroinformatioal systems
Course Unit Code: 19.PRP030
Name of Lecturer(s): Jan J Turan, PhD, Full Professor
Type and Level of Studies: Master 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: 6
Prerequisites: No
Course Aims: The goal of the course is to familiarize students with the methods and ways of exploiting and applying agricultural techniques in the field. Students will learn about the elements of agro-information systems, their use and management
Learning Outcomes: After passing the course, students acquire knowledge that enables proper exploitation and use and application of modern agricultural techniques in agricultural production, which are covered by agro-information systems.
<p>Syllabus:</p> <p><i>Theory</i></p> <p>Selection of machines and aggregates for growing technologies of certain crops, aggregates for specific sowing systems. Energy efficiency of certain technologies and technological schemes of growing agricultural crops. Technological schemes of transport systems, modern transport aggregates, transshipment transport aggregates, energy justification of the application of various technological schemes of transport and transshipment. Energy justification of the application of different technologies in specific technological processes of agricultural production. Consumption of human and machine work and mutual comparison during the exploitation of applied agro-information systems through precision agriculture systems.</p> <p><i>Practice</i></p> <p>Creation of works from the areas covered in the lecture, application of methods of measuring exploitation and energy indicators of the work of agricultural machinery. Solving the problem of optimization of composition and rationalization of energy consumption in the application of various technologies of agricultural production. Implementation of agricultural information systems through precision agriculture systems.</p>
<p>Required Reading:</p> <p>Turan, J.: Eksploatacija proizvodnih sistema, Poljoprivredni fakultet, Novi Sad, 2009.;</p> <p>Milić, R.: Osnovi organizacije proizvodnje, FON, Beograd, 2004.</p> <p>Turan, J.: Optimizacija tehničko-tehnološke strukture žetvenog sistema, Poljoprivredni fakultet, Novi Sad, 2003.</p> <p>John Stafford, 2018: Precision Agriculture for Sustainability. Burleigh Dodds Science Publishing Limited, Oct 26, 2018 - 514 pages. ISBN 9781138364158</p> <p>Brett Whelan, James Taylor, 2013: Precision agriculture for grain production systems. Csiro Publishing, 208 pages. ISBN</p>

9780643107472

Qin Zhang, 2015: Precision Agriculture Technology for Crop Farming. CRC Press, pg. 360. ISBN 9781482251074

Weekly Contact Hours: 4

Lectures: 2

Practical work: 2

Teaching Methods:

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	Points	Final exam	Points
Active class participation		written exam	
Practical work		oral exam	60
Preliminary exam(s)		
Seminar(s)	40		

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