

Course Unit Descriptor

<b>Study Programme:</b> Agricultural engineering and information systems			
<b>Course Unit Title:</b> Diagnostics of technical systems			
<b>Course Unit Code:</b> 19.PTII46			
<b>Name of Lecturer(s):</b> Milan D. Tomić			
<b>Type and Level of Studies:</b> Undergraduate (8 semesters, 240 ECTS)			
<b>Course Status (compulsory/elective):</b> elective			
<b>Semester (winter/summer):</b> winter			
<b>Language of instruction:</b> Serbian			
<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> -			
<b>Course Aims:</b> Training of students with technological procedures for diagnosing the working condition of technical systems used in agricultural machinery.			
<b>Learning Outcomes:</b> Student's ability to register and analyze diagnostic parameters and their functional connections with the state of the system.			
<b>Syllabus:</b> <i>Theory</i> Getting to know the impact of diagnostics on the technical and technological exploitation of technical systems, structural and diagnostic parameters and systems. Diagnostic methods (subjective diagnostic procedures - visual examination, objective diagnostic procedures - measurement of temperature, number of revolutions, vibrations, pressure and flow). Automated diagnostic systems and convenience for diagnostics. Diagnostic algorithm. Diagnostic methods and parameters of individual SUS engine systems (external speed characteristics, diagnostic methods and parameters for assessing the condition of piston-cylinder engine assemblies, integral diagnostics of the engine fuel supply system). Diagnostics of the hydraulic system of agricultural machines, Diagnostics of electronic systems of agricultural machines (electrical measurements, sensors, executive elements-actuators, conductors, fuses, electronic communication systems, electronic diagnostic devices of modern agricultural machines). <i>Practice</i> Practical work on diagnostic procedures and analysis of measured parameters.			
<b>Required Reading:</b> 1. Tomić M., Furman T, Tot A. Remont i održavanje poljoprivredne tehnike, Poljoprivredni fakultet Novi Sad, 2017. 2. Gunić N. Dijagnostika elektronskih sistema motornih vozila I deo, Beograd, 2014. 3. Ostojić N. Autodijagnostika OBD-2, Mikroelektronika Beograd, 2007. 4. Simonović D., Ivanović M. Auto elektronika 2, kompjuterska dijagnostika, Autotehnika, Beograd 2005.			
<b>Weekly Contact Hours:</b> 4		<b>Lectures:</b> 2	<b>Practical work:</b> 2
<b>Teaching Methods:</b> Lectures with the use of video presentations, demonstration exercises in laboratory (workshop) conditions, independent work with diagnostic equipment. Consultations within lectures and exercises.			
<b>Knowledge Assessment (maximum of 100 points):</b>			
<b>Pre-exam obligations</b>	points	<b>Final exam</b>	points
Active class participation	5	written exam	20
Practical work	20	oral exam	30
Preliminary exam(s)		.....	
Seminar(s)	25		
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			