Course Unit Descriptor

Study Programme: Agricultural engineering and information systems			
Course Unit Title: Repair and maintenance of technical systems			
Course Unit Code: 19.PTIO31			
Name of Lecturer(s): Milan D. Tomić			
Type and Level of Studies: Undergraduate (8 semesters, 240 ECTS)			
Course Status (compulsory/elective): compulsory			
Semester (winter/summer): summer			
Language of instruction: Serbian			
Mode of course unit delivery (face-to-face/distance learning): face-to-face			
Number of ECTS Allocated: 3			
Prerequisites: -			
Course Aims: Acquaintance with maintenance problems, mastering the available and developing new maintenance technologies for agricultural machinery.			
Learning Outcomes: The ability of the candidate-student to perceive the problem of maintenance of technical systems and the possibility of providing concrete solutions in order to increase the efficiency of the planned operations.			
Syllabus: *Theory* Basic concepts about machine repairs, malfunctions and reliability. Analysis of technical failures, examination, character of action, causes and consequences. Basics of tribology, lubricants and lubrication. Corrosion. The role and task of the system for maintaining the operational correctness of agricultural machinery. Technological procedures for repairing parts of agricultural machinery, mechanical procedures, welding, metallization and plasticization procedures. Technical maintenance and diagnostics of agricultural machinery. Application of documentation and information systems. Spare parts inventory management. *Practice* Work on disassembly-assembly activities (use of tools). Defecting of specific parts of agricultural machinery and wear analysis (use of measuring equipment). Practical work on the implementation of technical maintenance operations of agricultural machinery. Acquaintance with diagnostic equipment (engine brakes, sealing of the piston-cylinder assembly, compression, high-pressure pump diagnostics, oil diagnostics, OBD 2). Getting to know the equipment for the regeneration of machine parts.			
Required Reading: 1. Tomić M., Furman T, Tot A. Remont i održavanje poljoprivredne tehnike, Poljoprivredni fakultet Novi Sad, 2017. 2. Pešić Z. Tehnologija održavanja pogonske opreme, Vojnoizdavački zavod, Beograd 2009. 3. Pešić Z. Tehnologija održavanja motornih vozila, Vojnoizdavački zavod, Beograd 2009. 4. Klinar I. Tehnička eksploatacija mašina, Fakultet tehničkih nauka Novi Sad, 2015. 5. Ružić D. Motori SUS u praksi - eksploatacija, održavanje i remont, Mikro knjiga Beograd 2014.			
Weekly Contact Hours: 5	**Lectures:** 3	**Practical work:** 2	
Teaching Methods: Lectures with the use of video presentations, demonstration exercises in laboratory and field conditions, creation of assignments, laboratory and seminar work, examination in laboratory and field conditions and consultations within lectures and exercises.			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	**Final exam**	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.			