Course Unit Descriptor

Study Programme: Precision agriculture			
Course Unit Title: Machines in forestry and waterpower engineering			
Course Unit Code: 19.PRP032			
Name of Lecturer(s): Aleksandar D. Sedlar, PhD, Full Professor			
Type and Level of Studies: Master degree			
Course Status (compulsory/elective): elective			
Semester (winter/summer): winter			
Language of instruction: English			
Mode of course unit delivery (face-to-face/distance learning): face to face			
Number of ECTS Allocated: 5			
Prerequisites: No			
Course Aims: Acquisition of theoretical and practical knowledge related to the application of machines in forestry and water management.			
Learning Outcomes: The knowledge obtained within the subject should enable the correct selection and use of machines with an emphasis on increasing economy and efficiency, as well as the environmental acceptability of their exploitation.			
Syllabus: *Theory* Importance of mechanization in forestry. Traction machines in forestry. Machines for the construction of forest communications. Machines for planting forest seedlings. Machines and devices in forest exploitation. Machines and devices for extracting seedlings. Machines, equipment and devices for extracting trees. The importance of machines and mechanized operations in water management. Canal digging machines. Duct cleaning machines. Machines for drainage works. Floating facilities for canal maintenance and cleaning. Equipment and devices for sprinkler irrigation. Equipment and devices for local irrigation. *Practice* Introduction with technical solutions and characteristics of modern machines in forestry and water management. Machine operation, adjustment and maintenance. Making assignments from the mentioned areas. Display of machines in operation. Visit to work organizations and the Agricultural Fair in Novi Sad with a display of newer types of machines.			
Required Reading: Nikolić S. 1990. Mehanizacija u šumarstvu, Šumarski fakultet, Beograd, Univerzitetski udžbenik. Đukić N. 2005. Melioracione mašine, Poljoprivredni fakultet, Novi Sad, skripta. Sedlar A. 2018. Mašine u šumarstvu i vodoprivredi, autorizovana predavanja			
Weekly Contact Hours: 4	**Lectures:** 2	**Practical work:** 2	
Teaching Methods: Theoretical teaching: verbal-textual and demonstrative illustrative methods. Practical teaching: management of students' independent work, demonstrative and illustrative methods, display of machines in operation, computational methods.			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	Points 50	**Final exam**	Points 50

Active class participation	5	written exam	
Practical work		oral exam	50
Preliminary exam(s)		…….	
Seminar(s)	45		
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			