

Course Unit Descriptor

Study Programme: Precision agriculture			
Course Unit Title: Machines testing			
Course Unit Code: 19.PRP011			
Name of Lecturer(s): Jan J Turan, 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: Acquaintance of students with procedures, standards and equipment for testing agricultural machinery			
Learning Outcomes: Knowledge of standards, methods and procedures for testing machines in crop production (farming, vegetable growing, fruit growing, viticulture and animal husbandry).			
Syllabus:			
<i>Theory</i>			
Strategy and organization of agricultural machinery testing. Presentation of test results. Methods for testing machines in: soil cultivation, fertilizing, sowing and planting, plant protection, harvesting and processing of basic arable, vegetable, fruit and viticultural crops. Structure and basic characteristics of machine testing equipment. Measurement errors and analysis of measured quantities. Visualization of data in appropriate software, presentation and interpretation of data in accordance with standards.			
<i>Practice</i>			
Laboratory and field examination and testing of machines according to ISO/TC 23/SC 19 standards; ISO/TC 23/SC 2; ISO/TC 23/SC 6; ISO/TC 23/SC 7.			
Required Reading:			
1 ISO/TC 23/SC 19 - Agricultural electronics			
2 ISO/TC 23/SC 2 - Common tests			
3 ISO/TC 23/SC 6 - Equipment for crop protection			
4 ISO/TC 23/SC 7 - Equipment for harvesting and conservation			
5 ISO/TC 23 - Tractors and machinery for agriculture and forestry			
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.			