Course Unit Descriptor

Study Programme: ORGANIC AGRICULTURE

Course Unit Title: Machines in Organic Agriculture

Course Unit Code: 19.ORG019

Name of Lecturer(s): Mirko Simikić

Type and Level of Studies: Undergraduate

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: 6

Prerequisites: None

Course Aims:

Acquiring theoretical and practical knowledge of soil tillage in organic agriculture. Introduction to the basic structures of tractors, mobile systems and machinery used in the production of safe food and its impact on land degradation.

Learning Outcomes:

Competence to select, plan, manage and exploit modern machinery in organic production, as well as for environmental protection.

Syllabus:

Theory

The basics of tractors and mobile systems. Methods of soil tillage in organic agriculture and combine harvesters. Disinfection of soil. Machinery for sowing and planting. Methods and equipment for weed control in organic agriculture. Special machines in organic agriculture. Manipulation with manure and fertilization. The protection of agricultural plots. Harvesting crops in organic agriculture. Soil compaction as a result of poor choices and uncontrolled use of tractors and mobile systems. Precision agriculture and GPS in organic agriculture.

Practice

Exercises, Other methods of teaching, Research work

Introduction to the structure of tractors and mobile systems. Introduction to the use, basic parts, principle of operation, configuration, maintenance during operation and protective measures when working with machines for standard and conservational tillage, fertilization, seeding and planting, inter-row cultivation, spraying and harvesting crops. Introduction to the equipment for testing soil compaction and testing the soil compaction under field conditions.

Required Reading:

1. Meši M: Agricultural machinery, Faculty of agriculture Novi Sad, 2012
2. Lazić et al. Organic Agriculture, Institute of Field and Vegetable Crops, 2008
3. Simikić and Savin: Soil compaction in organic and conventional farming, Faculty of agriculture Novi Sad, 2022

Weekly Contact Hours: 6	**Lectures: 4**	**Practical work: 2**

Teaching Methods:

The method of oral presentations and discussions. The method of drawing, presentations, demonstrations, simulations and illustrations on the board and by using video presentations. Consultations and seminar papers. The method of practical work in laboratories and at the Institute

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	points	**Final exam**	points
Active class participation	10	written exam	20
Practical work		oral exam	55

Preliminary exam(s)	15	…….	
Seminar(s)			
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			