Course Unit Descriptor

Study Programme: Organic Agriculture

Course Unit Title: Basic principles of crop production

Course Unit Code: 19.ORG008

Name of Lecturer(s): Prof. dr Srđan Šeremešić, MSc Bojan Vojnov

Type and Level of Studies: Undergraduate studies

Course Status (compulsory/elective): Compulsory

Semester (winter/summer): Summer

Language of instruction: English

Mode of course unit delivery (face-to-face/distance learning):

Number of ECTS Allocated: 6

Prerequisites:

Course Aims:
The aim of this subject is to introduce students with the basic principles of crop management. Knowledge gained from this subject will help students to choose an appropriate cropping system and to select suitable management practices in field crops production.

Learning Outcomes:
Demonstrate the basic knowledge in selection of agro-technical measures, method and time of their application in crop production and their effects on yield formation, crop development and soil properties.

Syllabus:
Theory: Soil tillage, importance and objectives of primary tillage. Plowing, disking, cultivating, harrowing and rolling, field cultivating (time, depth, methods, tools), seedbed preparation. The tillage system for winter, spring and stubble crops. Tillage systems by soil types (hydromorphic and halomorhpic). Conservation tillage. Fertilization, fertilizer and method and time of application. Rationale of cultivating plants in the field. Fertilization with organic and mineral fertilizers. Crop rotation, crop rotation elements, the reasons for the introduction of crop rotation and preceding value of crops. Classification of crop rotation - arable crop rotations, special crop rotations. Grass farming system and the system of free cropping management, system of industrial farming, integrated farming, ecological farming/sustainable systems, intercropping. Weeds and their control, the definition and classification of weeds. Seed, sowing and planting, seed characteristics, preparation of seed for sowing, time, depth, method of sowing. Crop care, mechanical, physical and chemical measures. Water erosion and deflation as the factors causing soil degradation. Agro-technical measures to combat erosion and deflation.
Practice: Types of plowing and evaluation of primary tillage and seedbed preparation (stubble tillage, cultivators, disk harrow, harrowing and rollers). Fertilization time and method of fertilization, calculation of the necessary amount of nutrients in crop rotation, determination of the amount of crop residues. Crop rotation - planning, preparation and introduction of crop rotation. Identification of the most important weeds, weed propagation, life forms of weeds. Sowing and planting, seeding method. Determining the standards for seed sowing.

Required Reading:

Weekly Contact Hours:	**Lectures:3**	**Practical work:2**

Teaching Methods: Lectures, Practical classes, Consultations

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	points	**Final exam**	points
Active class participation	5	written exam	35
Practical work		oral exam	60
Preliminary exam(s)		…….	
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.