Course Unit Descriptor

Study Programme: Landscape architecture

Course Unit Title: Sustainable Agriculture

Course Unit Code: 19.PEJ042

Name of Lecturer(s): Associate. prof. dr. Srđan, I., Šeremešić, Prof. dr. Maja, S., Manojlović, dr Klara, M., Petković, MSc Bojan Vojnov

Type and Level of Studies: Undergraduate academic studies

Course Status (compulsory/elective): Elective

Semester (winter/summer): Summer

Language of instruction: English

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

Number of ECTS Allocated: 6

Prerequisites: None

Course Aims:

The aim of this subject is explain the ecological trends in modern agriculture intended for production of safe food with the least impact on the environment.

Learning Outcomes:

Student should demonstrate the understanding of ecological dimension in crop production and to recognize the management practice that favors the sustainable development of the agroecosystem.

Syllabus:

Theory: Introduction to sustainable agriculture. Interaction of sustainable agriculture and other systems of crop production. The importance of sustainable agriculture - agronomical, environmental, economic and social aspects. Legislation in organic agriculture. Management practices and their impact on the environment (soil, water, air). Tillage systems and their adjustments to the goals of sustainable agriculture. Importance of crop rotation and the basic principles for crop rotation introduction, preparation and evaluation. Importance of intercropping in sustainable agriculture. Knowledge, cultivation and uses of intercrops. Crop needs for fertilization. Nutrients cycles and anticipated losses of nutrients. Sources of nutrients for crops. The importance of organic and microbiological fertilizers. Introduction to balanced fertilization. Fertilization and environmental protection. Biological methods in crop protection. Buffer zones and strips, biodiversity in agroesystems.

Practical classes:
Visiting farms with different production systems (conventional, integrated, organic), introduction to applied management systems, evaluation and suggestions for improvement.

Required Reading:

1. Altieri, M. Agroecology: The Science Of Sustainable Agriculture, Second Edition. Westview Press, 1995
2. Lichtfouse, E., Navarrete, M., Debaeke, P., et al. Sustainable Agriculture. Springer, 2009
3. Adel El Titi. Soil Tillage in Agroecosystems. CRC Press , 2002

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

Teaching Methods: Lectures, Practical classes, Consultations and Seminar papers.

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	points	**Final exam**	points
Active class	10	written exam	30

participation			
Practical work	20	oral exam	40
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.			