Study Programme: Landscape architecture

Course Unit Title: Soil protection

Course Unit Code: 19.PEJ040

Name of Lecturer(s): Vladimir I. Ciric PhD, Associate professor

Type and Level of Studies: Bachelor Academic 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: 6

**Prerequisites:** /

### **Course Aims:**

The course aims to acquire students' knowledge about soil as a natural resource, soil melioration aspects of Serbian soil classification, types of soil degradation influenced by technological development, and measures for its protection.

## **Learning Outcomes:**

The outcome of the course is education and training of students for work in the field of soil degradation protection, the application of reclamation and remediation methods.

## **Syllabus:**

#### Theory

Soil as a natural resource. Basic functions of the soil. Types of degradation: Wind and water erosion. Degradation of chemical, physical, and biological processes in the soil by in-situ damage. Meliorative aspects of land classification. Global environmental changes and soil degradation. Impact of agricultural production on the soil. Contamination of soil with fertilizers, heavy metals, radionuclides, pesticides. Soil protection technology from different types of degradation. Remediation and reclamation of contaminated and damaged soils

#### Practice

Exercises, Other forms of teaching, Research work: Field soil research. Laboratory tests: active and potential acidity, salinity, and alkalinity of the soil. Fractionation of organic matter in the soil. Methods for determination of heavy metals. Parameters related to the assessment of soil contamination.

## **Required Reading:**

- 1. Novica V. Vučić, Soil hygiene, Vojvodina Academy of Sciences and Arts, Novi Sad, 1992.
- 2. Sekulić P., Kastori R., Hadžić V., Soil protection from degradation, Institute of Field and Vegetable Crops, Novi Sad, 2003
- 3. Miljković N., Meliorative pedology, Faculty of Agriculture, University of Novi Sad., 2005
- 4. Milivoj Belić, Ljiljana Nešić, Vladimir Ćirić, Practicum in pedology, Faculty of Agriculture, University of Novi Sad., 2014

Weekly Contact Hours: Lectures: 2 Practical work: 2

# **Teaching Methods:**

Method of oral presentation and conversation. Methods of presentation, demonstration, simulation, drawing, and illustration. Consultations and seminar papers. Method of practical work in laboratories and Institute.

Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	Final exam	points
Active class participation	5	written exam	30
Practical work	5	oral exam	30
Preliminary exam(s)	15		
Seminar(s)	15		

The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.