**Level**: bachelor

**Course title:** Soil Protection

**Status**: obligatory for OKK, elective for OZZS

**ECTS**: 8

**Requirements**: none

**Learning objectives**

Introduction to the basic characteristics of soil. Mastering the basics of soil quality control, conservation measures and soil remediation techniques.

**Learning outcomes**

Students should be able to define and specify the ecological problems and consequences of soil pollution, apply the basic quality control measures and methods for soil protection; analyze the basic physical and chemical properties of soil; analyze pollutants in soil.

**Syllabus**

*Theoretical instruction*

Soil as part of the environment, the definition and basic characteristics. Morphological, physical and chemical properties. Pollution and soil protection. Impact of agricultural production (fertilizers, pesticides and heavy metals). Urban industrial polluters, the oil industry, air pollution and radionuclides. Methods of soil remediation. Counter-current solvent extraction. Thermal remediation. Biological remediation.

*Practical instruction*

Practical instructions are in compliance with the theoretical ones.

| **Weekly teaching load** | | | | Other: / |
|---|---|---|---|---|
| Lectures: 3 (45) | Exercises: 3(45) | Other forms of teaching: 1(15) | Student research: / | |