

Study Programme: Soil and plant nutrition			
Course Unit Title: Soil			
Course Unit Code: ZMZI1002			
Name of Lecturer(s): Associate Professor Simonida Djuric, Assitant Professor Vladimir Ciric			
Type and Level of Studies: Master Academic Degree			
Course Status (compulsory/elective): Compulsory			
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: Passed examination in Microbiology and Soil science at the undergraduate level			
Course Aims: Gaining knowledge about soil as a medium for plant production.			
Learning Outcomes: The subject is the basis for the education and training of students for professional and scientific work in the field of soil and plant nutrition..			
Syllabus: <i>Theory</i> Pedogenetic factors and processes. External and internal morphology of the soil. Soil texture. Soil structure. Water and air in the soil. Soil thermal properties. Chemical properties of soil. Principles and criteria for national and major worldwide soil classification systems. Application of chemical ameliorative practice for acid and alkaline soils. Abundance of sistematic group of microorganisms in soil. Abiotic and biotic factors. The role of microorganisms in sinthesys and mineralisation of organic matter in soil. <i>Practice</i> Collecting of disturbed and undisturbed soil samples. Laboratory analysis of soil: salinity and alkalinity, characteristics of adsorption complex, water retention, total and differential porosity. Determination of microbial number and activity in different types of soil. Isolation, growth and identification of bacteria, fungi, algae and protozoa.			
Required Reading: R. E. White: Principles and practice of soil science. Blackwell publishing, 2006. M.R. Ashman and G. Puri: Essential soil science, Blackwell publishing, 2006. Alexander, M: Soil microbiology, John Wiley & Sons, inc, 1961. Eldor A. Paul: Soil Microbiology, Ecology and Biochemistry, Elsevier, 2014			
Weekly Contact Hours: 5	Lectures: 3	Practical work: 2	
Teaching Methods: Lectures and Practical classes, Consultations if needed.			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	Final exam	points
Active class participation	5	written exam	
Practical work	10	oral exam	50
Preliminary exam(s)	30	
Seminar(s)	5		
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			