

<b>Study Programme:</b> Soil and Plant Nutrition			
<b>Course Unit Title:</b> Soil Biochemistry			
<b>Course Unit Code:</b> 3MZI1110			
<b>Name of Lecturer(s):</b> Associate Professor Dejan Prvulović PhD			
<b>Type and Level of Studies:</b> Master Academic Degree			
<b>Course Status (compulsory/elective):</b> Elective			
<b>Semester (winter/summer):</b> Summer			
<b>Language of instruction:</b> English			
<b>Mode of course unit delivery (face-to-face/distance learning):</b> Face-to-face			
<b>Number of ECTS Allocated:</b> 6			
<b>Prerequisites:</b> None			
<b>Course Aims:</b> The course aims to provide an advanced understanding of the core principles and topics of soil biochemistry and their experimental basis, and to enable students to acquire a specialized knowledge and understanding of interactions between microorganisms, plants and soil.			
<b>Learning Outcomes:</b> To gain knowledge on molecular aspects of biochemical processes and interactions in soil.			
<b>Syllabus:</b> <i>Theory</i> Soil enzymes. Soil organic carbon chemical and biochemical transformation. Origin of humic and fulvic acids in soil. Biochemical transformations of organic compounds with nitrogen, sulfur and phosphorus in soil. Biochemical interactions with metals. Biochemical transformation of xenobiotics in soil. Secondary metabolites in soil: origin and function. <i>Practice</i> Enzymes of nitrogen metabolism. Effects of herbicides and toxicants on formation of free radicals. Secondary metabolites in soil.			
<b>Required Reading:</b> 1. Bollag J.M., Stotzky G. 2000. Soil Biochemistry. Marcel Dekker Inc., New York 2. Paul E.A., Clark F.E. 1996. Soil Microbiology and Biochemistry. Academic Press, New York			
<b>Weekly Contact Hours:</b> 3	<b>Lectures:</b> 2	<b>Practical work:</b> 1	
<b>Teaching Methods:</b> Lectures, laboratory work and students group work			
<b>Knowledge Assessment (maximum of 100 points):</b>			
<b>Pre-exam obligations</b>	points	<b>Final exam</b>	points
Active class participation		written exam	
Practical work	10	oral exam	50
Preliminary exam(s)		.....	
Seminar(s)	40		
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam,			

project presentation, seminars, etc.