

Course Unit Descriptor

Study Programme: Agronomy			
Course Unit Title: Soil Biochemistry			
Course Unit Code: 3DAI2076			
Name of Lecturer(s): Associate Professor Dejan Prvulović PhD			
Type and Level of Studies: Doctoral Academic Degree			
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: 10			
Prerequisites: None			
Course Aims: 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.			
Learning Outcomes: To gain knowledge on molecular aspects of biochemical processes and interactions in soil.			
Syllabus: <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.			
Required Reading: 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			
Weekly Contact Hours: 3	Lectures: 2		Practical work: 1
Teaching Methods: Lectures, laboratory work and students group work			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	Final exam	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.