

Study program: Agricultural Sciences			
Type and level of study: Doctoral academic studies			
Course Title: Soil Quality Management in agriculture			
Teacher(s): Dr Jovica Vasin, Research Associate; dr Ljubinko Jovanovic, full professor			
Status: Elective 4, IV semester			
ECTS: 11			
Prerequisite: None			
The goal of the course: Introduction to the principles of long-term maintenance of soil quality in the various system production.			
The outcome of the subject: Completed the planned program, students will dispose of significant findings related to the establishment, maintenance of soil quality in relation to the type of crop plants. Through study research, will acquire practical skills in this area.			
Syllabus: <i>Theoretical study</i> – Soil as live dynamic system. The management of soil quality as a basis for improving the productivity and quality of soil and its characteristics necessary for growing plants. Parameters important for processed and adopted laws soil quality, organic matter, soil conservation structures, optimal use of bio pesticides and bio fertilizers, soil compaction (optimal water air regime). Biodiversity: the role of plant belts area, biobarriers to protect water from pollutants. Role of crop rotation to improve soil quality. The role of plant residues and soil coverage for long-term maintenance of soil fertility. Multiple roles of land in the environment. Land as a dynamic system. The role of the microorganisms and other beneficial organisms in the soil. Soil water regime. Indicators of soil quality (physical, chemical, biological). Cycles of nutrients in the soil matrix. Methods of revitalization land, bioremediation techniques. <i>Practical classes</i> - Active participation in defining indicators of soil quality, service area through practical handling and research.			
Literature:			
<ol style="list-style-type: none"> 1. Foreign and domestic literature (review papers, books and presentations from the Internet) 2. White, Robert E (2012): Principles and Practice of Soil Science. The Soil as a Natural Resource https://www.pdfdrive.com/principles-and-practice-of-soil-science-the-soil-as-a-natural-resource-e34478756.html 3. Ing. Jaafar MOHAM (2014): Soil & Soil Mechanics Textbook Collected by, https://www.researchgate.net/publication/275212467_Soil_and_Soil_Mechanics_textbook 4. W. Lee Daniels Basic Soil Science, https://www.google.com/search?client=firefox-b&q=soil+book+free+download, http://pubs.ext.vt.edu/430/430-350/430-350_pdf.pdf 			
Number of lectures: 10			Other Classes
Lectures: 4	Practices:	Other forms of teaching:	
Teaching methods:			
Score for grading (maximal 100 points)			
Pre-commitments	Poens	The final exam	Poens
Activity during lectures	10	Written exam	20
Practical classes	40	Oral examination	20
Colloquia			
Seminars	10		
<i>Total</i>	60		40