

Course Unit Descriptor

Study Programme: Soil, plant and genetics			
Course Unit Title: Crop and harmful organism modeling			
Course Unit Code: 19.ZB9008			
Name of Lecturer(s): prof. dr Branislava Lalić			
Type and Level of Studies: Master Academic Studies			
Course Status (compulsory/elective): elective			
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: 5			
Prerequisites: Meteorology course at undergraduate studies			
Course Aims: Students should gain knowledge about structure and functionalities of crop models and models simulating harmful organism development			
Learning Outcomes: Students able for individual instalation, calibration and validation of models.			
Syllabus: <i>Theory</i> Modeling concepts. Model types. Time and spatial scale of models. Model characteristics. Calibration and validation of model. Crop model sensitivity on extreme weather events and related uncertainties. Model application. Models and algorithms for pest and diseases prediction. Agroclimatic indices and algorithms. <i>Practice</i> Input data preparation. Instalation and use of models. Output results analysis.			
Required Reading: 1. Lalic, B., Eitzinger, J., Dalla Marta, A., Orlandini, S., Firanj Sremac, A., Pacher, B. (2018) Agricultural Meteorology and Climatology, Firenze University Press, Florence, p.354, ISBN 978-88-6453-795-5, http://www.fupress.com/archivio/pdf/3808_16282.pdf 2. Thornley, J.H.M., Johnson, I.R., 1990: Plant and crop modeling, pg. 661			
Weekly Contact Hours: 5	Lectures: 3		Practical work: 2
Teaching Methods: Lectures, discussion, practical work			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	Final exam	points
Active class participation	0	written exam	
Practical work	49	oral exam	51