Course Unit Descriptor

Study Programme: Soil, Plant and Genetics			
Course Unit Title: Plant physiological responses to changing environmental conditions			
Course Unit Code: 19ZB9002			
Name of Lecturer(s): Full professor Ivana Maksimović			
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: 6			
Prerequisites: None			
Course Aims: The aim of the subject is to teach students about mechanisms by which climate changes impact plant metabolism, mechanisms of plant adaptations and factors affecting them.			
Learning Outcomes: Students should acquire knowledge on the impact of climate changes on physiological processes in plants and ways by which negative impact of climate changes may be mitigated and applied in practice.			
Syllabus: *Theory* Interactions between environmental conditions and plant development, growth, energy production, and ion and nutrient balance and storage, Hidden stress during crop growth and yield, Environmental stress factors, Combination of environmental stresses, Modes of action of biostimulants, Plant priming and stress tolerance, Plant phenotypic plasticity in a changing climate *Practice* Submitting plants to various kinds of abiotic stress and following physiologiccal processes under those conditions.			
Required Reading: Taiz L, Zeiger E, Møller IM, Murphy A (2014) Plant Physiology and Development, Sixth Edition, Sinauer Associates. Pessarakli M (1999) Handbook of Plant and Crop Stress, Second edition, Revised and Expanded, Marcel Dekker, New Yourk - Basel. FAO (2018) Climate Smart Agriculture: Building Resilience to Climate Change. Lipper L, McCarthy N, Zilberman D, Asfaw S, Branca G (eds) Rome.			
Weekly Contact Hours: 5	**Lectures:** 45	**Practical work:** 30	
Teaching Methods: Lectures, Practical classes, Consultations, Research work, Seminar papers			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	**Final exam**	points
Active class participation	5	written exam	
Practical work	25	oral exam	70

Preliminary exam(s)		…….	
Seminar(s)			
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			