

Study Programme : Doctoral studies - Biology				
Degree level: Doctoral degree				
Course Title: Physiological Plant Anatomy				
Professor: dr Jadranka Lukovic, dr Lana Zoric				
Required/Elective Course: Elective Course				
Number of ECTS: 15				
Prerequisites: -				
Course Objective: Getting knowledge about complexity and interactions between structural characteristics of tissues, organs, plant organism in a whole and plant physiological processes.				
Course Outcome: After finishing this course students should obtain knowledge that would enable them to understand and follow actual investigations in this field.				
Course Content: <i>Theoretical part</i> – Interaction of structure and function. Vascular tissue: phloem structure and transport of assimilates. Xylem structure and water transport. Secretory tissue and types of secretion. Cranz anatomy of leaf and photosynthesis. Stomatal apparatus, gas exchange and transpiration. Dermal tissue characteristics and foliar absorption. Leaf vein endings and transport of assimilates. Anatomical changes of vegetative organs in relation to excessive or deficit mineral nutrition. Changes in the structure of plant organs induced by excessive or deficit presence of macro and microelements. <i>Practical part</i> - The structure of practical work is in accordance with candidat's field of research and the subject of PhD thesis.				
Reading List: Denffer, D., Ziegler, H. (1991): Ботаника. Морфологија и физиологија. Школска Књига, Загреб. Dickison C. W. (2000): Integrative plant anatomy, Harcourt academic press, New York, London. new publications and papers available on internet				
Total hours:				
Lectures: 5	Practicals:	Other:	Student research work: 5	
Methods of instruction: lectures, practical work, student research work, consultations				
Assessment (maximum number of points 100)				
Requirements: The exam is oral. Prerequisites for oral exam are: active involvement of students in experimental work on specific subjects dealing with physiological anatomy, written and presented student's practical work and read out of several scientific papers from this field.				
Remark:				