

Study Programme : Master Biology - Botany			
Degree level: Master degree			
Course Title: Applied Plant Anatomy			
Professor: dr Jadranka Lukovic, dr Lana Zoric			
Required/Elective Course: Elective Course			
Number of ECTS: 8			
Prerequisites: -			
Course Objective: Getting knowledge of possibilities of application of plant anatomy in: agriculture, forestry, horticulture, biotechnology, pharmacognosy, paleobotany and other fields.			
Course Outcome: After finishing this course students should be able to apply their plant anatomy knowledge in different fields, which is important from scientific and economic reasons.			
Course Content: <i>Theoretical part</i> – Meristems – application in vegetative reproduction and transplantation. Meristem culture. Embryo culture as the way of vegetative reproduction. Anatomy, inheritance and breeding. Anatomy as indicator of hybridization. Gene expression on anatomical traits. Anatomy and phytoremediation. Anatomy and pharmacognosy – application of anatomy in detection of plant drugs and their substituents. Plant fibers – products and use. Wood – structure, characteristics and use. Dendrochronology, dendroclimatology. Application of plant anatomy in paleobotany and forensics. <i>Practical part</i> – Visits to laboratories in which plant anatomy is applied for different purposes. Practical and student research work is in accordance with students’ field of research and the subject of their master thesis.			
Reading List: Botha T., Cutler D. (2007): Plant Anatomy: An Applied Approach, Blackwell Pub Cutler D.F. (1978): Applied plant anatomy, Longman, London Dickison C. W. (2000): Integrative plant anatomy, Harcourt academic press, New York, London Pearsall D. (1989): Paleoethnobotany, Academic Press, Orlando, Florida new literature and published papers available on internet			
Total hours:			
Lectures: 2	Practicals:	Other: 2	Student research work: 5
Methods of instruction: lectures, exercises, student research work, consultations			
Assessment (maximum number of points 100)			
Requirements	points	Final exam	points
Active participation in lectures		Test	
Active participation in practicals		Oral exam	70
Colloquia	30		
Seminars			
Remark:			