

**(Table 5.2) Course unit description**

<b>Study program:</b> Molecular Biology			
<b>Type and level of studies:</b> Master academy study – II level of studies			
<b>Course unit:</b> Plant Molecular Biology and Ecology			
<b>Teacher in charge:</b> Milan S. Stankovic Ph.D., Biljana M. Bojovic, Ph.D			
<b>Language of instruction:</b> English			
<b>ECTS:</b> 6			
<b>Prerequisites:</b> /			
<b>Semester:</b> Summer Semester			
<b>Course unit objective</b> Knowledge and understanding of theoretical and practical approaches in molecular biology and ecology of plants.			
<b>Learning outcomes of Course unit</b> The acquired knowledge and skills in the field of molecular biology and ecology of plants with application possibilities in scientific research and practice.			
<b>Course unit contents</b> <i>Theoretical classes</i> The introduction to plant molecular biology and ecology. The basic principles and molecular methods in plant taxonomy, paleobotany, plant evolution biology and phytogeography. The biology and ecology of plant secondary metabolites. Variability and regulation of secondary metabolism. The integrative roles of plant secondary metabolites in natural systems: a synthesis. Plant secondary metabolites and interactions between plants and other organisms: the potential of a metabolomic approach. Models of application of secondary metabolites.  <i>Practical classes</i> Temporal and spatial variability in quantity and activity of secondary metabolites in the natural and experimental plant samples. The influence of ecological factors on the intensity of plant secondary metabolism. The examination of allelopathic relations during the germination, growth and development of plants.			
<b>Literature</b> Jeffrey B. Harborne, Billie Lee Turner. Plant Chemosystematics, Academic Press, 1997. Adrian Slater, Nigel W. Scott, Mark R. Fowler. Plant biotechnology: the genetic manipulation of plants, Oxford University Press, 2008. Glenn R. Iason, Marcel Dicke, Susan E. Hartley. The Ecology of Plant Secondary Metabolites: From Genes to Global Processes, Cambridge University Press, 2012.			
<b>Number of active teaching hours</b>			<b>Other classes</b>
Lectures:	Practice:	Other forms of classes: Mentoring (consultative) system	
Independent work:			
<b>Teaching methods</b> Introduction to the teaching unit using a power point presentation, as well as additional oral explanations. Interactive discussion, exercises.			
<b>Examination methods (maximum 100 points)</b>			
<b>Exam prerequisites</b>	<b>No. of points:</b>	<b>Final exam</b>	<b>No. of points:</b>
Student's activity during lectures		oral examination	20
practical classes/tests	20	written examination	20
Seminars/homework	20		
Project	20		
Other	/		
<b>Grading system</b>			
<b>Grade</b>	<b>No. of points</b>	<b>Description</b>	
10	91-100	Excellent	
9	81-90	Exceptionally good	
8	71-80	Very good	
7	61-70	Good	

6	51-60	Passing
5	< 50	Failing