

<b>Study programmes:</b> PhD studies – Mathematics, Applied Mathematics				
<b>Course name:</b> 3M512 – Finite Difference Method				
<b>Lecturers:</b> Aleksandar Savić, Sandra Živanović, Aleksandra Delić				
<b>Status:</b> Optional				
<b>ECTS:</b> 9				
<b>Attendance prerequisites:</b> No prerequisites.				
<b>Course aims:</b> Introduction to the finite difference method and training for creative work.				
<b>Course outcome:</b> After completing this course, the student has fundamental knowledge about the finite difference method. He is able to independently solve real problems using appropriate software.				
<b>Course content:</b> Mesh. Finite differences. Mathematical apparatus in the theory of differential schemes. Methods for designing difference schemes. Maximum principle. Energy method. Approximation. Convergence. Conservative schemes. Monotone schemes. Stability. Economical finite difference schemes.				
<b>Literature:</b> 1. С. Вукмировић, Геометрија за информатичаре, 2006, Математички факултет, Београд (скрипта) 2. З. Лучић, Еуклидска и хиперболичка геометрија, Београд 2007				
<b>Number of hours:</b> 10	<b>Lectures:</b> 4	<b>Tutorials:</b> -	<b>Laboratory:</b> -	<b>Research:</b> 6
<b>Teaching and learning methods:</b> Frontal / Interactive / Exercises				
<b>Assessment (maximal 100 points)</b>				
<b>Course assignments</b>	<b>points</b>	<b>Final exam</b>		<b>points</b>
Lectures	-	Written exam		-
Exercises / Tutorials	-	Oral exam		70
Colloquia	-	Written-oral exam		-
Essay / Project	30			