

## Specification for the book of courses

<b>Study program</b>		Electrical Engineering and Computer Science		
<b>Module</b>		Electronics		
<b>Type and level of studies</b>		Undergraduate Academic Studies		
<b>The name of the course</b>		Numerical Mathematics		
<b>Lecturer (for lectures)</b>		Kovačević A. Milan		
<b>Lecturer/associate (for exercises)</b>		Kovačević A. Milan		
<b>Lecturer/associate (for OFE)</b>				
<b>Number of ECTS</b>	6	<b>Course status (obligatory/elective)</b>	Elective	
<b>Prerequisites</b>				
<b>Course</b> Providing the basic concepts in Numerical Mathematics				
<b>Course outcomes</b> Students' capability to apply numerical algorithms in the profession.				
<b>Course outline</b>				
<b>Theoretical teaching</b>	Numerical methods for solving the systems of linear equations. Direct methods. Iterative methods. Ill-conditioned systems. Nonlinear equations and systems. Newton method and modifications. Secant method. Bisection method. Algebraic equations solving. Newton-Kantorovich method for systems of nonlinear equations. Approximation of functions. Lagrange and Hermite interpolation. Least-square approximation. Numerical differentiation and integration. Newton-Cotes and Gaussian quadrature formulas.			
<b>Practical teaching (exercises, OFE, study and research)</b>	Practical teaching conducted through solving problems and tasks that are within the scope of theoretical lectures. It is intended for better knowledge acquiring and understanding, and its transformation into serviceable knowledge.			
<b>Textbooks/references</b>				
1	G.V. Milovanović: Numerical Analysis I, Naučna Knjiga, Belgrade, 1991. (Serbian)			
2	G.V. Milovanović: Numerical Analysis I, Naučna Knjiga, Belgrade, 1991. (Serbian)			
3	G.V. Milovanović, M.A. Kovačević: A Collection of Solutions for Problems in Numerical Analysis, Naučna knjiga, Belgrade, 1991. (Serbian)			
4				
5				
<b>Number of classes of active education per week during semester/trimester/year</b>				
<b>Lectures</b>	<b>Exercises</b>	<b>OFE</b>	<b>Study and research work</b>	<b>Other classes</b>
3	2	0	0	0
<b>Teaching methods</b>	Lectures, auditory exercises, consultations			
<b>Grade (maximum number of points 100)</b>				
<b>Pre-exam duties</b>	<b>Points</b>	<b>Final exam</b>	<b>Points</b>	
<b>Activity during lectures</b>	5	<b>Written exam</b>	20	
<b>Exercises</b>	15	<b>Oral exam</b>	20	
<b>Colloquia</b>	40			
<b>Projects</b>				