

Specification for the book of courses

Study program		Electrical Engineering and Computer Science		
Module		Control Systems		
Type and level of studies		Undergraduate Academic Studies		
The name of the course		Mathematical Methods		
Lecturer (for lectures)		Kovačević A. Milan, Rančić Z. Lidija, Marinković D. Slađana		
Lecturer/associate (for exercises)		Milošević D. Predrag		
Lecturer/associate (for OFE)				
Number of ECTS	6	Course status (obligatory/elective)	Elective	
Prerequisites				
Course objectives	Acceptance of basic knowledges necessary for implementing programs for interactive modeling of free form curves and for fractal modeling			
Course outcomes	Acquiring theoretic knowledge and practical skills; Handling of mathematical methods and applying in problems solution.			
Course outline				
Theoretical teaching	Numerical solution of linear system of algebraic equations. Direct and iterative methods. Eigenvalues of matrices. Nonlinear equations. Systems of nonlinear equations. Interpolation and approximation. Numerical differentiation. Numerical integration. Numerical solution of ODEs. Numerical solution of PDEs.			
Practical teaching (exercises, OFE, study and research)	exercises			
Textbooks/references				
1	G.V. Milovanović: Numerical Analysis I, Naučna Knjiga, Belgrade, 1991. (Serbian)			
2	G.V. Milovanović: Numerical Analysis II, Naučna Knjiga, Belgrade, 1991. (Serbian)			
3	G.V. Milovanović: Numerical Analysis III, Naučna Knjiga, Belgrade, 1991. (Serbian)□			
4				
5				
Number of classes of active education per week during semester/trimester/year				
Lectures	Exercises	OFE	Study and research work	Other classes
3	2	0	0	0
Teaching methods	lecturing using blackboard, practical exercises			
Grade (maximum number of points 100)				
Pre-exam duties	Points	Final exam	Points	
Activity during lectures	10	Written exam	30	
Exercises		Oral exam	20	
Colloquia	40			
Projects				