

Specification for the book of courses

Study program		Electrical Engineering and Computer Science		
Module		Common		
Type and level of studies		Undergraduate Academic Studies		
The name of the course		Mathematics 2		
Lecturer (for lectures)		Rančić Z. Lidija, Kovačević A. Milan, Marinković D. Slađana, Džunić S. Jovana, Matejić M. Marjan		
Lecturer/associate (for exercises)		Marjanović M. Zvezdan, Ranđelović M. Branislav, Matejić M. Marjan, Jovančić S. Vladan, Milošević D. Predrag, Stankov D. Stefan		
Lecturer/associate (for OFE)				
Number of ECTS	6	Course status (obligatory/elective)	Obligatory	
Prerequisites				
Course objectives				
Mastering the basic knowledge of mathematical analysis. Acquiring the ability to turn the underlying theoretical considerations into functional knowledge. Setting the basics of iterations and approximations.				
Course outcomes				
Ability of students to understand and use the language of mathematical analysis. Students have acquired the knowledge necessary to continue learning mathematics and engineering disciplines.				
Course outline				
Theoretical teaching				
Metric spaces. Sequences of real numbers. Characteristics and convergence of sequences. Basic properties of real functions of a real variable. Limits and continuity. Features of continuous functions and applications. Differential calculus with applications. Derivatives and differentials of the first and higher order. Geometric and analytical consequences. Integration of functions of a real variable. Indefinite, Riemann, improper integrals. Methods of integration. Properties and applications of the integrals.				
Practical teaching (exercises, OFE, study and research)				
The corresponding examples and tasks that follow the theoretical part of the course are being implemented, which contributes to a better understanding of the presented theoretical material, problem recognition and their resolution.				
Textbooks/references				
1	Gradimir Milovanović, Radosav Đorđević, Mathematical analysis I, Faculty of Electronic Engineering, University of Niš, 2005. (Serbian)			
2	M. Merkle, Mathematical analysis, Faculty of Computer Science, Belgrade, CET Belgrade, 2006. (Serbian)			
3	P. Miličić, M. Uščumlić, Collection of tasks of higher mathematics I, Scientific book, Belgrade 1988. (Serbian)			
4	e-collection of tasks- https://moodle.elfak.ni.ac.rs/			
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	1
Teaching methods				
Lectures, auditory exercises, consultations				
Grade (maximum number of points 100)				
Pre-exam duties		Points	Final exam	Points
Activity during lectures		10	Written exam	20
Exercises		10	Oral exam	20
Colloquia		40		
Projects				