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	Probability and Statistics		
Lecturer (for lectures)	Milošević M. Dušan		
Lecturer/associate (for exercises)	Jovančić S. Vladan		
Lecturer/associate (for OFE)			
Number of ECTS	5	**Course status (obligatory/elective)**	Elective
Prerequisites			
Course	Mastering basic knowledge of probability and statistics.		
Course outcomes	Theoretical basic knowledge in the probability theory and statistics.		
Course outline			
Theoretical teaching	Random events. Definition of probability. Conditional probability and independence of events. Total probability rule and Bayes' formula. Random variables. Distribution function. Numerical characteristics of random variables. Mathematical expectation, moments, dispersion, standard deviation. Chebyshev's inequality and the rule of "three sigma". Characteristic functions and properties. Distribution of discrete and continuous random variables. Central limit theorem. Basic concepts of statistics. Population and random sample, Central Statistics Theorem. Displaying statistical data from a sample. Statistical distributions. Parameter estimation and efficiency ratings. Confidence intervals. Hypothesis testing. Pearson's chi-squared test. Linear regression and correlation. Getting acquainted with the SPSS software package.		
Practical teaching (exercises, OFE, study and research	Exercises follow the lectures.		
Textbooks/references			
1	D. M. Milošević, L. Z. Rančić, M. S. Petković, Mathematics IV (in Serbian), University of Niš, Faculty of Electronic Engineering, 2015.		
2	M. Merkle: Probability and statistics for engineers and engineering students (in Serbian), Academic Thought, Belgrade 2006.		
3			
4			
5			

Number of classes of active education per week during semester/trimester/year				
Lectures	**Exercises**	**OFE**	**Study and research work**	**Other classes**
2	2	0	0	0
Teaching methods	Lectures, exercises auditive,consultation.			

Grade (maximum number of points 100)			
Pre-exam duties	**Points**	**Final exam**	**Points**
Activity during lectures	10	**Written exam**	30
Exercises		**Oral exam**	30
Colloquia	30		
Projects			