

Study programmes: Bachelor studies – Mathematics				
Course name: Probability				
Lecturers: Marko Obradović, Milan Jovanović, Bojana Milošević				
Status: Compulsory				
ECTS: 6				
Attendance prerequisites: M111				
Course aims: Learning basics of probability theory.				
Course outcome: Upon completing the course, a student has basic knowledge in probability theory and is capable to apply his knowledge to modeling real situations.				
Course content: Discrete probability space. Conditional probability. Total probability. Independence of events. Discrete random variable, its mathematical expectation and variance. Discrete random vectors. Independence of random variables. Important discrete distributions. Binomial distribution and Bernoulli theorem. Chebyshev law of large numbers. Moivre-Laplace theorem and normal distribution. Poisson distribution. Sigma-algebra. Axioms of probability theory. Absolutely continuous distribution functions (normal, uniform, exponential). Kantor singular distribution function. Decompositions of df. Multivariate df. Random variable (general definition). Mathematical expectation. Variance. Independence. Covariance and correlation coefficient. Modeling random variables.				
Literature: 1. В. Јевремовић, Ј. Малишић, Статистичке методе у метеорологији и инжењерству, Савезни хидрометеоролошки завод, Београд, 2002 2. R.J. Larsen, M.L. Marx, An Introduction to Mathematical Statistics and Its Applications, Pearson Education, N. Jersey, 2006				
Number of hours: 4	Lectures: 2	Tutorials: 2	Laboratory: -	Research: -
Teaching and learning methods: Frontal / Tutorial				
Assessment (maximal 100 points)				
Course assignments	points	Final exam		points
Lectures	10	Written exam		-
Exercises / Tutorials	-	Oral exam		
Colloquia	10	Written-oral exam		70
Essay / Project	10			