

Level: bachelor				
Course title: Probability (M4-15)				
Status: obligatory				
ECTS: 7				
Requirements: passed exam in course Analysis 2 (M4-08)				
Learning objectives Becoming familiar with the basic concepts of probability theory.				
Learning outcomes After taking the course and learning the content of the subject, students should possess the basic knowledge in the area, and get the ability to apply it in the other subjects and areas.				
Syllabus <i>Theoretical instruction</i> Random events, algebra of events. Definition of probability, properties of probability. Conditional probability, independent events. Borel-Cantelli lemmas. Total probability formula, Bayes formula. Random variables, discrete and absolutely continuous types. Moivre-Laplace theorem. Some basic distributions. N-dimensional random variables, marginal distributions. Independency of random variables, conditional distributions. Transformations of random variables. Expectation and dispersion of random variables, properties of expectation and dispersion. Characteristic functions, Limit theorems. <i>Practical instruction</i> Problem-solving sessions.				
Weekly teaching load				Other: 0
Lectures: 3	Exercises: 3	Other forms of teaching: 0	Student research: 0	