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| **UNIVERSITY OF NIŠ** | | | | | | |
| **Course Unit Descriptor** | | **Faculty** | | | Faculty of Science and Mathematics | |
| **GENERAL INFORMATION** | | | | | | |
| Study program | | | | **Mathematics** | | |
| Study Module (if applicable) | | | |  | | |
| Course title | | | | Introduction to Probability | | |
| Level of study | | | | xBachelor ☐ Master’s ☐ Doctoral | | |
| Type of course | | | | x Obligatory ☐ Elective | | |
| Semester | | | | ☐ Autumn xSpring | | |
| Year of study | | | | II | | |
| Number of ECTS allocated | | | | 8 | | |
| Name of lecturer/lecturers | | | | Prof dr. Miljana Jovanović | | |
| Teaching mode | | | | xLectures ☐Group tutorials ☐ Individual tutorials  ☐Laboratory work ☐ Project work ☐ Seminar  ☐Distance learning ☐ Blended learning ☐ Other | | |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** | | | | | | |
| Mastering the fundamental concepts of elementary probability theory and mathematical basis of the theory of probability. | | | | | | |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** | | | | | | |
| Elementary probability theory: the algebra of events, a classic definition of probability, conditional probability, independence of events.  Random variables: discrete and absolutely-continuous distributions, distribution function and probability density function, expectation, variance, correlation coefficient, independence.  Bernoulli scheme, Poisson and Muavr-Laplace theorem.  Multidimensional random variables.  Transformations of random variables.  Sequences of random variables: convergence, simple lows of large numbers, the central limit theorem. | | | | | | |
| **LANGUAGE OF INSTRUCTION** | | | | | | |
| xSerbian (complete course) ☐ English (complete course) ☐ Other \_\_\_\_\_\_\_\_\_\_\_\_\_ (complete course)  ☐Serbian with English mentoring ☐Serbian with other mentoring \_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | | | |
| **ASSESSMENT METHODS AND CRITERIA** | | | | | | |
| **Pre exam duties** | **Points** | | **Final exam** | | | **points** |
| **Activity during lectures** | **10** | | **Written examination** | | |  |
| **Practical teaching** |  | | **Oral examination** | | | **50** |
| **Teaching colloquia** | **40** | | **OVERALL SUM** | | | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** | | | | | | |