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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** |