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| **UNIVERSITY OF NIŠ** | | | | | | |
| **Course Unit Descriptor** | | **Faculty** | | | Faculty of Occupational Safety in Niš | |
| **GENERAL INFORMATION** | | | | | | |
| Study program | | | | Environmental Engineering | | |
| Study Module (if applicable) | | | | / | | |
| Course title | | | | Selected Areas of Mathematics | | |
| Level of study | | | | ☐ Bachelor ☐ Master’s ☒ Doctoral | | |
| Type of course | | | | ☒ Obligatory ☐ Elective | | |
| Semester | | | | ☒ Autumn ☐Spring | | |
| Year of study | | | | First year | | |
| Number of ECTS allocated | | | | 10 | | |
| Name of lecturer/lecturers | | | | Mirjana Vidanović | | |
| Teaching mode | | | | ☒Lectures ☐Group tutorials ☒ Individual tutorials  ☐Laboratory work ☒ Project work ☐ Seminar  ☐Distance learning ☐ Blended learning ☐ Other | | |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** | | | | | | |
| *Acquiring knowledge in mathematics needed for analysis, making models and simulation of structures and processes in living and working environment. Adopting methods for choosing the software programmes for the analysis of risks and safety system in living and working environment.* | | | | | | |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** | | | | | | |
| Combinatorics and Graph Theory. Logic in Computing. Discrete Mathematics. Selected Chapters from the Financial Mathematics. Probability, Statistics and Stochastic Processes. Differential and Difference Equations. Numerical Mathematics. Operational Research. Mathematical Modelling and Risk Simulation. Selected Chapters in Theories of Engineering Experimentation. | | | | | | |
| **LANGUAGE OF INSTRUCTION** | | | | | | |
| ☒ Serbian (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** | **-** | | **Written examination** | | | **20** |
| **Project work** | **30** | | **Oral examination** | | | **40** |
| **Project work presentation** | **10** | | **OVERALL SUM** | | | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** | | | | | | |