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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty** | Faculty of Electronic Engineering |
| **GENERAL INFORMATION** |
| Study program  | **Electrical Engineering and Computing** |
| Study Module (if applicable) | Electrical Power Engineering |
| Course title | Mathematics 3 |
| Level of study | ☒Bachelor ☐ Master’s ☐ Doctoral |
| Type of course | ☒ Obligatory☐ Elective |
| Semester  | ☒ Autumn ☐Spring |
| Year of study  | II |
| Number of ECTS allocated | 6 |
| Name of lecturer/lecturers | Stefanović V. Lidija |
| Teaching mode | ☒Lectures ☒Group tutorials ☐ Individual tutorials☐Laboratory work ☐ Project work ☐ Seminar☐Distance learning ☐ Blended learning ☐ Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| *Getting knowledge in some fields of mathematics by theory and its application.*  |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| *Series. Numerical and functional series. Fourier series. Ordinary differential equations. First order differential equations. Second order linear differential equations. Second order linear difference equations. Real functions of more than one real variable. Limits. Partial derivatives and differentials. Extremal values. Integrals. Line, double, triple and surface integrals. Fields theory. Space derivatives. Flux and circulation. Types of vector fields. Complex analysis. Complex functions. Cauchy--Riemann conditions. Complex integration. Residue calculus. Laplace transform. Definition, properties and application. Fourier transform. Definition, properties and application. Discrete Fourier transform (DFT)* |
| **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** | **10** | **Written examination** | **20** |
| **Practical teaching** | **10** | **Oral examination** | **20** |
| **Teaching colloquia** | **40** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |