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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 | Power System Analysis |
| Level of study | ☒Bachelor ☐ Master’s ☐ Doctoral |
| Type of course | ☒ Obligatory ☐ Elective |
| Semester  | ☐Autumn ☒Spring |
| Year of study  | 4 |
| Number of ECTS allocated | 6 |
| Name of lecturer/lecturers | Dragan S. Tasić |
| Teaching mode | ☒Lectures ☐Group tutorials ☒ Individual tutorials☒Laboratory work ☐ Project work ☐ Seminar☐Distance learning ☐ Blended learning ☐ Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| *The objective of the course is to introduce the students with basic calculations in power systems: power flow calculations, short-circuit currents calculations and stability calculations.* |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| **Overview of fundamental theorems in electric power networks. The bus admittance and impedance matrices. Calculations of network symmetrical operating states. Gaus-Seidell solution method and Newton-Raphson solution method for power flow calculation. Short-circuit current calculation. Symmetrical components. Matrix methods for calculating short-circuit currents. Power systems stability criteria. Stability at small disturbances. Transient stability. Basics of voltage stability.** |
| **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** |
| **Practical teaching** | **10** | **Oral examination** | **20** |
| **Teaching colloquia** | **50** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |