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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** | | | | | | |