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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 | Exploitation of Electric Power Networks |
| Level of study | [ ] Bachelor [x]  Master’s [ ]  Doctoral |
| Type of course | [x]  Obligatory [ ]  Elective |
| Semester  |  [x]  Autumn [ ] Spring |
| Year of study  | 1st  |
| Number of ECTS allocated | 6 |
| Name of lecturer/lecturers | Korunović M. Lidija, Janjić D. Aleksandar |
| Teaching mode |  [x] Lectures [x] Group tutorials [ ]  Individual tutorials [ ] Laboratory work [ ]  Project work [ ]  Seminar [ ] Distance learning [ ]  Blended learning [ ]  Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| Introduce the basic terms regarding exploitation of electric power networks to the students. Consideration of parameters of daily load curves, static state estimation, economic aspects of exploitation of electric power networks and the security of electric power networks. Study of load variations during the year and daily load curve forecasting. Consideration of tariffs and tariff systems for calculations of purchase and sale of electric energy, changes in distribution of electric energy and models of energy market organization. Students are enabled to perform state estimation of electric power systems and to solve the problems of economic dispatch.  |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| Daily load curve. Static state estimation. Security of electric power networks. Operation regimes and security. Static security of electric power interconnections. Economic dispatch. Optimal power flow. Load variations during the year and daily load curve forecasting. Tariffs and tariff systems for calculations of purchase and sale of electric energy. The changes in distribution of electric energy and the models of energy market organization.  |
| **LANGUAGE OF INSTRUCTION** |
| [x] Serbian (complete course) [ ]  English (complete course) [ ]  Other \_\_\_\_\_\_\_\_\_\_\_\_\_ (complete course)[x] Serbian with English mentoring [ ] Serbian with other mentoring \_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **ASSESSMENT METHODS AND CRITERIA** |
| **Pre exam duties** | **Points** | **Final exam** | **points** |
| **Activity during lectures** |  | **Written examination** | **40** |
| **Practical teaching** |  | **Oral examination** | **20** |
| **Teaching colloquia** | **40** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |