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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | Faculty of Electronic Engineering Nis |
| **GENERAL INFORMATION** |
| Study program  | Electrical Engineering and Computing |
| Study Module (if applicable) | Electronics |
| Course title | Power Electronics |
| Level of study | [ ] Bachelor [ ]  Master’s [x]  Doctoral |
| Type of course | [ ]  Obligatory [x]  Elective |
| Semester  | [x]  Autumn [x] Spring |
| Year of study  | 1 |
| Number of ECTS allocated | 10 |
| Name of lecturer/lecturers | Mančić D. Dragan |
| Teaching mode |  [x] Lectures [ ] Group tutorials [ ]  Individual tutorials [x] Laboratory work [x]  Project work [x]  Seminar [ ] Distance learning [ ]  Blended learning [ ]  Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| Expanding and upgrading the fundamental knowledge acquired in the field of power electronics and guidance towards the adoption of new techniques required by concrete and specific applications which are subject of interest to students. |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| Types of semiconductor power electronic switches. AC/DC converters. Rectifiers in switching mode of operation. Rectifiers for power factor corrector. Multi-quadrant work. DC/DC converters. DC/AC converters. Soft starters, frequency converters. Converters for medium voltage levels. Methods of control. Direct AC/AC converters. Sizing the components of inverter. Influence of converters on the power grid and electrical consumers. Utilization of special purpose softwares in the operation analysis of inverters. |
| **LANGUAGE OF INSTRUCTION** |
| [x] 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** |  |
| **Practical teaching** | **50** | **Oral examination** | **50** |
| **Teaching colloquia** |  | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |