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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | Electronic Engineering |
| **GENERAL INFORMATION** |
| Study program  | **Electronics and Microsystems** |
| Study Module (if applicable) | Electronic |
| Course title | Smart Grid Technologies |
| Level of study | [ ] Bachelor [x]  Master’s [ ]  Doctoral |
| Type of course | [ ]  Obligatory [x]  Elective |
| Semester  |  [x]  Autumn [ ] Spring |
| Year of study  | 1 |
| Number of ECTS allocated | 6 |
| Name of lecturer/lecturers | Dragiša Milovanović, Marko Dimitrijević |
| Teaching mode |  [x] Lectures [x] Group tutorials [x]  Individual tutorials [ ] Laboratory work [x]  Project work [x]  Seminar [ ] Distance learning [ ]  Blended learning [ ]  Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| *Mastering the knowledge in smart grid technologies: control, communication, energy production, energy storage, energy efficient distribution and smart metering.* |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| **Introduction in smart grid. Energy-efficient transmission. Command and control. Metering and home area networks. Data transfer in smart grids. Microgrids. Energy consumption forecasting. Distributed generation - wind, photovoltaics, fuel cells. Power grid SCADA systems. Smart meters and devices in the context of establishing microgrids. Properties of contemporary electric loads in power grid: harmonic distortion, THD, active/reactive/distortion power, power factor and power factor correction.** |
| **LANGUAGE OF INSTRUCTION** |
| [x] Serbian (complete course) [x]  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** |  |
| **Practical teaching** | **20** | **Oral examination** | **40** |
| **Teaching colloquia** | **30** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |