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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) | Telecommunications |
| Course title | Signal Processing in MIMO Systems |
| 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 | 4 |
| Name of lecturer/lecturers | Drača Lj. Dragan, Panajotović S. Aleksandra |
| Teaching mode |  [x] Lectures [ ] Group tutorials [ ]  Individual tutorials [ ] Laboratory work [x]  Project work [x]  Seminar [ ] Distance learning [ ]  Blended learning [x]  Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| Expand knowledge about wireless communication, actually to get introduced with contemporary MIMO systems. |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| Brief review of SISO systems. SIMO and MISO systems as transient solutions. MIMO channel. Space-time codes. Spatial multiplexing. MIMO transceiver design. OFDM. MIMO in LTE. Multiuser MIMO systems (MU-MIMO). Simulation and performance of MIMO and MU-MIMO systems. |
| **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** | **20** | **Written examination** | **20** |
| **Practical teaching** | **20** | **Oral examination** | **20** |
| **Teaching colloquia** | **20** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |