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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) | Electronics |
| Course title | RF systems architectures |
| Level of study | [ ] Bachelor [ ]  Master’s [x]  Doctoral |
| Type of course | [ ]  Obligatory [x]  Elective |
| Semester  | [ ]  Autumn [x] Spring |
| Year of study  | 2 |
| Number of ECTS allocated | 10 |
| Name of lecturer/lecturers | Goran Jovanović |
| Teaching mode |  [x] Lectures [ ] Group tutorials [ ]  Individual tutorials [x] Laboratory work [x]  Project work [ ]  Seminar [ ] Distance learning [ ]  Blended learning [ ]  Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| Overcoming the advanced techniques for architecture design, the transmitter, receiver and high-frequency circuits. Gaining practical knowledge of specialized software tools for designing RF circuits. |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| **Transmitter and receiver architectures. Technologies for RF circuits production. Non-linear and linear models of the active RF components. Software tools for design of RF circuits and systems. Passive filters in microstrip technology. Low-noise amplifiers (LNA). Noise optimization, intermodulation distortion, and stability factor. Configuration of balanced mixer. VCO with negative transconductance. PLL frequency synthesizers. RF power amplifiers. Duplexer. Multi standard receivers and transmitters.** |
| **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** |  |
| **Practical teaching** | **50** | **Oral examination** | **50** |
| **Teaching colloquia** |  | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |