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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 integrated circuits |
| Level of study | [ ] Bachelor [ ]  Master’s [x]  Doctoral |
| Type of course | [ ]  Obligatory [x]  Elective |
| Semester  | [x]  Autumn [ ] Spring |
| Year of study  | 1 |
| 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)** |
| Introduction to technology of RF integrated circuits’ production, design flow and verification. Description of the process for measuring and testing the fabricated integrated circuits. Introducing to RF designers job in a standard working environment. Usage of specialized software tools for RF circuit design. |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| **BiCMOS technology for RF and analog circuits. Design kit, installation, design rules, the most important parameters. Library elements, schematic symbols, simulation models, the layout. Library cells. Creation of new cell. Layout drawing. Pad in RF integrated circuits, bonding, chip packaging. Wires on a chip as matching networks elements and microstrip filters. Electromagnetic simulation of the layout. Equivalent reflection layout parameters. Layout vs. schematic verification (LVS). Design rules check (DRC). Design simulation. GDSII format. Fabrication.** |
| **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** |