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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | **Electronic** **Engineering** |
| **GENERAL INFORMATION** |
| Study program  | **Electrical Engineering and Computing** |
| Study Module (if applicable) | Electronic Devices and Microsystems, Telecommunications |
| Course title | Components for Telecommunications |
| Level of study | [x] Bachelor [ ]  Master’s [ ]  Doctoral |
| Type of course | [ ]  Obligatory [x]  Elective |
| Semester  |  [ ]  Autumn [x] Spring |
| Year of study  | 2nd |
| Number of ECTS allocated | 6 |
| Name of lecturer/lecturers | Ivica Manić, Danijel Danković |
| Teaching mode |  [x] Lectures [x]  Group tutorials [x]  Individual tutorials [x] Laboratory work [ ]  Project work [ ]  Seminar [ ] Distance learning [ ]  Blended learning [ ]  Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| *Introduction to most important passive and active devices and components for transmission, processing, amplification, receiving and emission of signals in telecommunications. Expected outcome is to understand electronic components and comprehend their applications in telecommunications.* |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| **Peculiarities of components for telecommunications. Transmission lines, classification of transmission lines. Connectors and sockets, passive electronic components, ferrite and combined components. Semiconductor materials and components: Si and III-V compounds, Diodes, Bipolar transistor, MOS transistor, LDMOS transistor, FETs. Integrated circuits and Digital circuit technologies, CMOS, BiCMOS. Dynamic RAM cells: capacitive cell, FLASH, FeRAM. Low noise receivers. Components in SMD technology.** |
| **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** | **10** | **Written examination** | **20** |
| **Practical teaching** | **30** | **Oral examination** | **20** |
| **Teaching colloquia** | **20** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |