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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 | Digital Systems |
| Level of study | [ ] Bachelor [ ]  Master’s [x]  Doctoral |
| Type of course | [ ]  Obligatory [x]  Elective |
| Semester  |  [ ]  Autumn [ ] Spring |
| Year of study  | 1 |
| Number of ECTS allocated | 10 |
| Name of lecturer/lecturers | Jevtić S. Milun |
| Teaching mode |  [x] Lectures [ ] Group tutorials [ ]  Individual tutorials [x] Laboratory work [ ]  Project work [ ]  Seminar [ ] Distance learning [ ]  Blended learning [ ]  Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| Acquire knowledge of advanced digital circuits and modules and modern architecture and implementation techniques of digital circuits and systems. Become familiar with all the real problems of realization of digital circuits and systems and ways to overcome them. |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| The basic characteristics of modern digital systems. VHDL design. Advanced technologies in the implementation logic, combinational and sequential circuits. Digital systems of high-speed operation. Digital systems with low supply voltage and low power consumption. Asynchronous digital systems. Modules for the implementation of complex arithmetic functions. New memory technologies. Digital integrated circuits with programmable elements. Modern A / D and D / A converters. Testranje digital circuits and systems. Signal integrity. Digital noise suppression. |
| **LANGUAGE OF INSTRUCTION** |
| [x] Serbian (complete course) [ ]  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** |  | **Written examination** |  |
| **Practical teaching** | **50** | **Oral examination** | **50** |
| **Teaching colloquia** |  | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |