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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) | Electronics |
| Course title | Electronic circuit testing |
| Level of study | [ ] Bachelor [ ]  Master’s [x]  Doctoral |
| Type of course | [ ]  Obligatory [x]  Elective |
| Semester  |  [ ]  Autumn [ ] Spring |
| Year of study  | 2 |
| Number of ECTS allocated | 10 |
| Name of lecturer/lecturers | Dragiša Milovanović |
| Teaching mode |  [x] Lectures [ ] Group tutorials [ ]  Individual tutorials [ ] Laboratory work [x]  Project work [x]  Seminar [ ] Distance learning [ ]  Blended learning [ ]  Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| The student learns the formation mechanisms of defects in electronic circuits (analog, digital and circuits with mixed signals) as well as procedures for synthesizing test signals for testing integrated electronic circuits.The student will be familiar with the causes of defects in integrated electronic circuits and will be able to create a test signal for detection of defects in integrated electronic circuits (analog, digital and mixed-signal). |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| Models of defects in analog and digital circuits. Concurrent simulation of defects. Testing of digital circuits. Testing combinational, sequential and circuits with regular topology. Automation of test generation. Testing and simulation of delay defects. Models of defects. Testing the system with mixed signals. Design for testability. Basic concepts. Boundary scan. Built-in self-test. Equipment for electronic circuit testing. |
| **LANGUAGE OF INSTRUCTION** |
| [ ] 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** | **50** |
| **Practical teaching** |  | **Oral examination** | **50** |
| **Teaching colloquia** |  | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |