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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty** |  |
| **GENERAL INFORMATION** |
| Study program  | **BASIC ACADEMIC STUDIES****Mechanical engineering** |
| Study Module (if applicable) |  |
| Course title | B.6.3-E.9-5 Electrical and Electronic Component in Mechatronic |
| Level of study | ☑Bachelor ☐ Master’s ☐ Doctoral |
| Type of course | ☐ Obligatory☑ Elective |
| Semester  | ☐ Autumn ☑Spring |
| Year of study  | III |
| Number of ECTS allocated | 6 |
| Name of lecturer/lecturers | Aca D. Micic |
| Teaching mode | ☑Lectures ☐Group tutorials ☐ Individual tutorials☐Laboratory work ☐ Project work ☐ Seminar☐Distance learning ☐ Blended learning ☐ Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| Program course is designed so that all students in the field of mechatronics familiar with the basic characteristics of basic electromechanical and electronic components. Students acquire knowledge on the basis of which they can use basic Electromechanics and electronic components and design simpler applications. Students are trained to use software packages for the simulation of electronic circuits |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| * Basic concepts and definitions
* Resistors
* Capacitors
* The coils and reactors
* PN junction, semiconductor diodes
* Thyristors, transistors,
* Types of transistors
* Kola with transistors
* Fet, circuits with FETs
* Operational amplifier
* AD and DA converters logic
* Digital circuits and microprocessors
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| **LANGUAGE OF INSTRUCTION** |
| ☑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** | **5** | **Written examination** | **0** |
| **Practical teaching** |  | **Oral examination** | **45** |
| **Teaching colloquia** | **15+15+15** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |