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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) | Computing and Informatics |
| Course title | Computer systems |
| Level of study | [x] Bachelor [ ]  Master’s [ ]  Doctoral |
| Type of course | [x]  Obligatory [ ]  Elective |
| Semester  |  [x]  Autumn [ ] Spring |
| Year of study  | 2 |
| Number of ECTS allocated | 6 |
| Name of lecturer/lecturers | Milentijević Z. Ivan, Tokić I. Teufik, Vojinović M. Oliver |
| 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)** |
| *Objective is transfer of basic knowledge on computer systems to students. At the end of the course students are expected to know basic computer architectures and programming model of the processor. Students will be able to make programs in assembly language.*  |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| **Review of the basic components of computer systems. Organization of a computer system. Processor. Memory subsystem. Busses. Input/output (I/O) subsystem. The structure of the processor and its functions. Register set. Fetch and execution of instructions. Arithmetic logic unit (implementation of computer operations). Representation of numeric and non-numeric data. The interrupt system. Microprocessor programming model. Macros. Procedures and parameter passing. Interrupt procedures. Organization of inputs / outputs. Parallel and serial I/O. I/O devices. Programmed I/O. Interrupt-driven I/O. DMA. Assembly language programming. Combining assembly and C/C++ code.**  |
| **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** | **20** | **Oral examination** | **40** |
| **Teaching colloquia** | **40** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |