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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | Pedagogical Faculty in Vranje |
| **GENERAL INFORMATION** |
| Study program  | Technical Education and Informatics |
| Study Module (if applicable) | / |
| Course title | Information technologies |
| Level of study | ☐Bachelor ☒ Master’s ☐ Doctoral |
| Type of course | ☒ Obligatory ☐ Elective |
| Semester  | ☒ Autumn ☐Spring |
| Year of study  | First |
| Number of ECTS allocated | 6 |
| Name of lecturer/lecturers | Dr Bratislav Predić |
| Teaching mode |  ☒ Lectures ☐Group tutorials ☐ Individual tutorials ☒ Laboratory work ☒ Project work ☐ Seminar ☐Distance learning ☐ Blended learning ☐ Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| *Purpose of this course is to give introduction and historical overview of development of computer and information technologies. After completing this course students will have a solid overview of theoretical and technical foundation of modern computer systems. Practical work as part of this course will introduce students to basics of current operating systems and applications commonly used in office/professional environment. With additional projects students will have an opportunity to participate in Internet Wiki communities and contribute with articles of their own. This course is a substantial basis for other information technology related courses.* |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| As an introductory course in computer science domain topics covered range from history of computers development up to recently adopted Internet technologies through 13 topics.After historical overview of computers technology development recapitulation of mathematical foundation of number systems is given from the computing perspective. Following topic is representation of various numerical and non-numerical data types in computer systems. Representation of numerical data types includes standardized IEEE 754 floating point representation of real numbers.Next topic covers computer systems architecture and central processing unit architecture. Based on acquired knowledge of processor architecture basic principles of machine code programming is presented as next part of this course.Following topic of this course deals with memory components of computer systems. This includes division into different types of memory subsystems and their characteristics. Finally, students are introduced to various memory addressing schemes used in machine code and assembler programming. Final part of this course discusses operating system and application software with basics of computer networking technologies and their impact on development of Internet. |
| **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** |  | **Written examination** | **40** |
| **Practical teaching** | **10** | **Oral examination** | **50** |
| **Teaching colloquia** |  | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |