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| **UNIVERSITY OF NIŠ** | | | | | | |
| **Course Unit Descriptor** | | **Faculty** | | | Faculty of Electronic Engineering | |
| **GENERAL INFORMATION** | | | | | | |
| Study program | | | | **Computing and Informatics** | | |
| Study Module (if applicable) | | | | Information systems | | |
| Course title | | | | Systems for large-scale data processing | | |
| Level of study | | | | Bachelor  Master’s  Doctoral | | |
| Type of course | | | | Obligatory  Elective | | |
| Semester | | | | Autumn Spring | | |
| Year of study | | | | 1 | | |
| Number of ECTS allocated | | | | 4 | | |
| Name of lecturer/lecturers | | | | Dragan H. Stojanović | | |
| Teaching mode | | | | Lectures Group tutorials  Individual tutorials  Laboratory work  Project work  Seminar  Distance learning  Blended learning  Other | | |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** | | | | | | |
| *Acquiring knowledge, methods and technologies for design and implementation of systems for large-scale data processing and analysis. Theoretical and practical knowledge about principles, methods, technologies, software tools, components and platforms for design and implementation of systems for large-scale data processing and analysis.* | | | | | | |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** | | | | | | |
| **Fundamental principles of processing, search and analysis of large-scale data (Big Data). Mobile, parallel and distributed databases and distributed query and transaction processing. NoSQL databases. Data stream and complex event management and processing systems. Cloud computing and large-scale data processing in cloud. Map/Reduce programming framework, Hadoop and related technologies for distributed processing of large-scale data. Data management in sensor networks. Analysis, design and implementation of systems for large-scale data processing. Applications based on systems for large-scale data processing.**  **Practical work on design and implementation of components and system for large-scale data search, processing and analysis and evaluation of such system on real massive dataset and actual application domains over the set of lab exercise and practical project.** | | | | | | |
| **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** | **10** | | **Written examination** | | | **40** |
| **Practical teaching** | **10** | | **Oral examination** | | |  |
| **Teaching colloquia** | **40** | | **OVERALL SUM** | | | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** | | | | | | |