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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 Technologies |
| Course title | Data mining techniques and methods |
| Level of study | [ ] Bachelor [x]  Master’s [ ]  Doctoral |
| Type of course | [ ]  Obligatory [x]  Elective |
| Semester  |  [x]  Autumn [ ] Spring |
| Year of study  | I |
| Number of ECTS allocated | 4 |
| Name of lecturer/lecturers | Milena Stankovic, Suzana Stojkovic |
| Teaching mode |  [x] Lectures [ ] Group tutorials [ ]  Individual tutorials [x] Laboratory work [ ]  Project work [x]  Seminar [ ] Distance learning [ ]  Blended learning [ ]  Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| The goal of this course is to introduce students to major data mining tasks and with special emphasis on the using the data mining techniques and methods into text analysis and information retrieval systems. After completing this course, students should acquire theoretical knowledge of the principles of the work of the data mining tools and to be able to use existing datamining open source tools and to develop new. |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| Major data mining tasks: classification, clustering, association, visualization and anomaly detection. Data classification methods: classification by decision trees, naïve Bayes method, classification by neural networks, classification by Support Vector Machines. Data clustering methods: methods for flat clustering, methods for hierarchical clustering. Using the data mining into text analysis (text mining) and information retrieval systems. |
| **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** | **10** | **Written examination** |  |
| **Practical teaching** | **20** | **Oral examination** | **30** |
| **Projects** | **40** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |